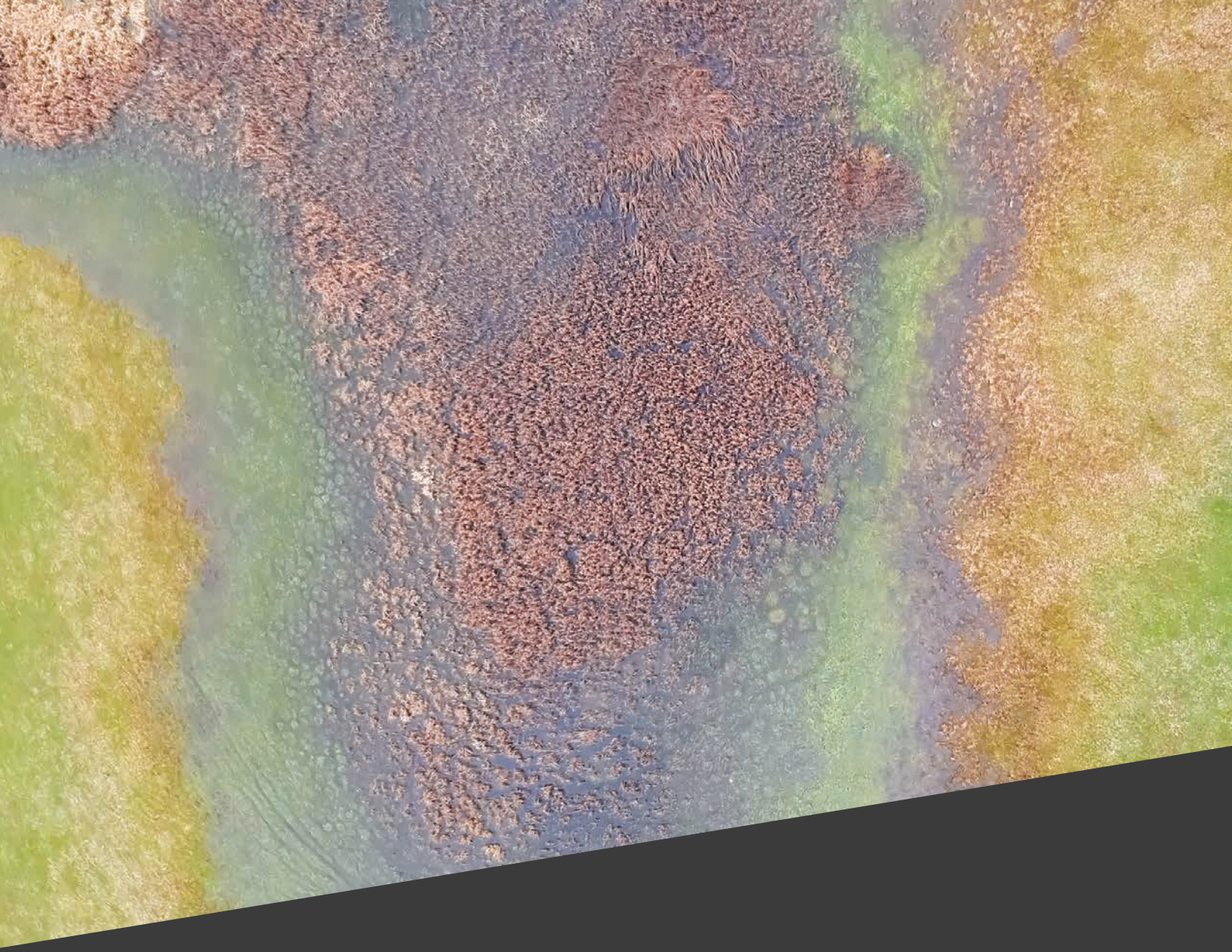

SASB STANDARDS

CLIMATE RISK

TECHNICAL BULLETIN

UPDATED AUGUST 2023

SASB STANDARDS

Now part of IFRS Foundation

CLIMATE RISK TECHNICAL BULLETIN

ABOUT THIS BULLETIN

The SASB Standards Climate Risk Technical Bulletin is intended to help investors and other providers of financial capital better understand their exposure to climate-related risks and opportunities. It also demonstrates for companies, regulators and policymakers how those exposures can be more effectively disclosed for integration into investment decisions.

ABOUT THE SASB STANDARDS

SASB Standards enable organisations to provide industry-based disclosures about sustainability-related risks and opportunities that could reasonably be expected to affect the entity's cash flows, access to finance or cost of capital over the short, medium or long term. 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. To download any of the 77 industry-based standards, or learn more, please visit **sasb.org.**

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CONTENTS

4 Introduction

4 Overview

5 SASB Standards and climate risk

6 SASB climate risk framework

6 SASB climate risk categories

9 SASB climate risk map

11 Financial impact channels

12 SASB financial impact channel map

14 SASB climate metrics table

36 Conclusion

INTRODUCTION

The SASB Climate Risk Technical Bulletin *is intended to help investors and other providers of financial capital better understand their exposure to climate-related risks and opportunities and also demonstrates for companies, regulators and policymakers how those exposures can be more effectively disclosed for integration into investment decisions.*

OVERVIEW

Today, it is widely recognized that the world's economic systems exist within—rather than apart from—its natural systems. For example, companies, investors, and other market participants now take it for granted that natural resources provide critical inputs to businesses, power their processes, and are impacted by their outputs as they seek to create value for customers, for shareholders, and for other stakeholders. However, this view was not always commonly held and, as a result, existing approaches to financial accounting and financial reporting were never designed to capture these linkages between financial capital and other critical sources of value.

In today's world, for example, concerns about climate change have heightened, with scientific consensus—and, increasingly, lived experience—indicating substantial long-term threats to the financial stability of markets, the resilience of investment portfolios, and the viability of some business enterprise. At the same time, detailed analysis suggests that bold action to address climate change could potentially yield a global economic gain of US$26 trillion through 2030.[1] Investors, as providers of the financial capital that is the lifeblood of global markets, have increasingly recognized the importance of measuring and managing their exposure to climate-related risks and opportunities.

As this bulletin demonstrates, these risks and opportunities are now undeniably present in nearly every industry. Because of this ubiquity, investors cannot diversify away from climate risk; instead, they must focus on managing it—and encouraging portfolio companies to manage it—in all its forms.

Among these risks are the physical effects of climate change, such as those due to the increasing frequency and severity of weather-related events; liabilities related to a shifting regulatory landscape; and the challenge of navigating the transition to a resilient, low-carbon economy. Each of these risks can have a positive or negative impact on a company's financial condition, operating performance, or cost of capital—and therefore on an investment portfolio's risk-return profile.

This bulletin is intended to assist investors and companies in their efforts to more effectively manage and communicate about climate risk. First, for investors, it presents a comprehensive view of where climate risk is likely to be present across a diversified portfolio and maps that risk to corresponding financial impacts to provide a greater understanding of exposures and value at risk. Second, for companies, the bulletin shares recommendations on how industry-specific climate risk can be more effectively measured, managed, and disclosed, ensuring markets have the information they need to price climate-related risks and opportunities.

1 Global Commission on the Economy and Climate, The New Climate Economy: Unlocking the Inclusive Growth Story of the 21st Century: Accelerating Climate Action in Urgent Times (September 2018).

SASB STANDARDS AND CLIMATE RISK

Climate risk has financial implications that are tangible and identifiable. The SASB Standards were designed to identify the sustainability issues reasonably likely to affect the prospects of the typical company in an industry. Each industry-specific disclosure topic, including those related to climate risk is mapped, to one or more channels of financial impact commonly evaluated by financial analysts—namely those that would affect a company's revenues and operating costs, the value of its assets and liabilities, and its financing costs. (See example in Figure 1.) For instance, an energy-intensive firm might be exposed to volatile energy prices, and/or incur future costs from internalization of carbon prices, while investments in energy efficiency and renewable energy sources may require research and development (R&D) and capital expenditures.

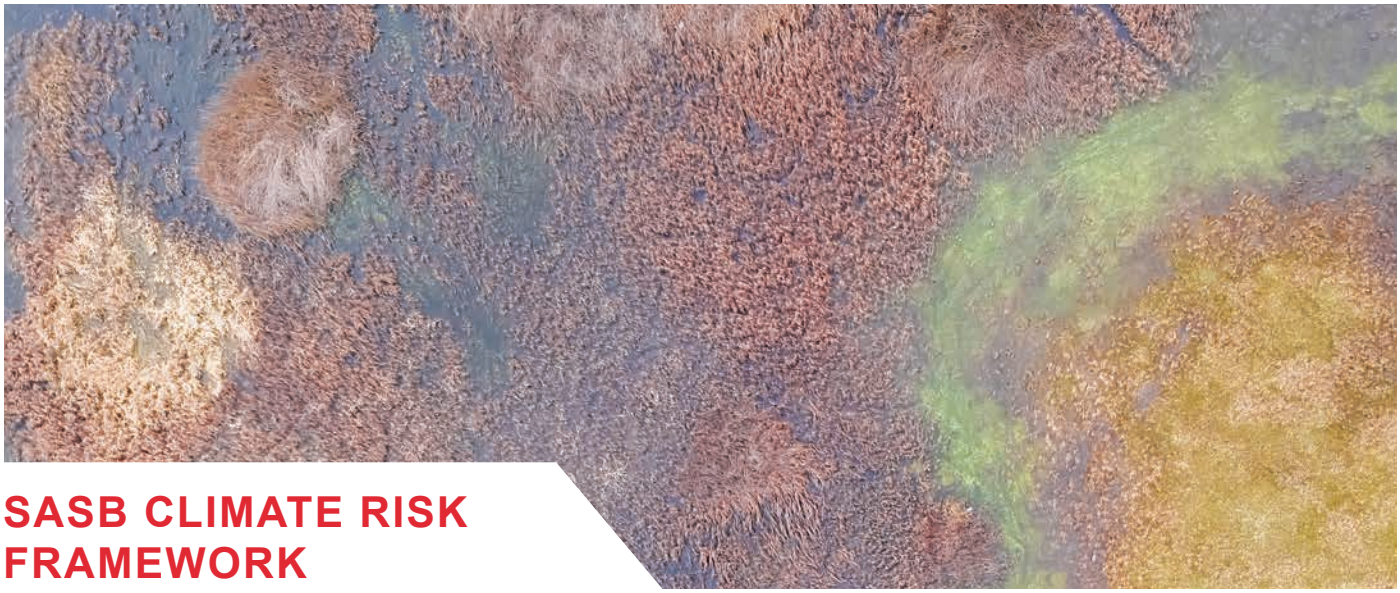
This bulletin identifies the financial impact channels associated with each type of climate risk in each industry (see Table 2).

Using the information contained in this bulletin, investors can gain a deeper understanding of the types of climate risk to which they are exposed, where those exposures lie, where they are likely to be uncompensated, and what types of financial impacts they are likely to have. Using the disclosure recommendations, companies can more effectively describe how they are managing climate-related risks, the related impacts on their financial position, and the relevant implications for their long-term financial performance and enterprise value.

Figure 1. Example of SASB Financial Impact Channels

SECTOR: **Resource transformation**
INDUSTRY: **Chemicals**
DISCLOSURE TOPIC: **Product design for use-phase efficiency**

Income Statement							Balance Sheet				Risk Profile	
Revenue			Operating expenses		Non-operating expenses		Assets		Liabilities		Financing costs	
Market share	New markets	Pricing power	Cost of revenue	R&D	CapEx	Extra-ordinary expenses	Tangible assets	Intangible assets	Contingent liabilities & provisions	Pension & other liabilities	Cost of capital	Industry divestment risk
■	■	■		■								

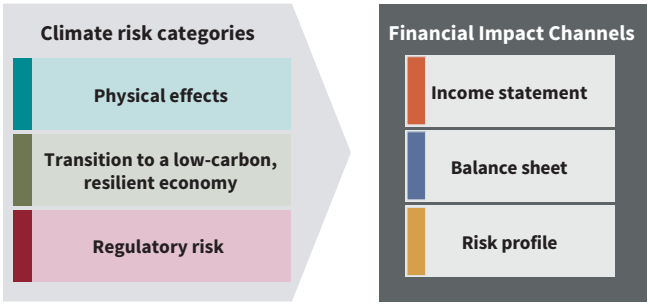


SASB CLIMATE RISK FRAMEWORK

Climate risk can affect investment risks and returns over the near, medium, and long term. Traditionally, many investors have evaluated the impacts of climate risk by assessing and reducing the "carbon footprint" of their portfolios (i.e., the Scope 1, Scope 2, and/or Scope 3 GHG emissions associated with each investment) or have considered divestment from fossil fuel companies or certain high-carbon industries, such as coal and tar sands. However, the ubiquity of climate risk and the wide range of differentiated impacts it has across a myriad of business operations suggest a wider range of information is needed to address climate risk exposure.

The approach in this bulletin links climate risk categories to corporate financial performance, and ultimately provides industry-specific disclosure topics and metrics that enable analysis of how these risks are being managed. The SASB climate risk framework, visualised in the following figure, addresses three distinct types of climate risk and three channels of financial impact through which climate risk can ultimately impact investment returns.

Figure 2. SASB Climate Risk Framework



The SASB climate risk framework enables:

- Recognition that climate-related risks manifest in industry-specific ways.
- Identification of key climate risks and opportunities and the specific financial impact channel through which they are likely to affect the value of the typical company in an industry over time.
- Preparation of disclosures by companies that provide decision-useful information to investors in a cost-effective way.

SASB CLIMATE RISK CATEGORIES

Below are detailed definitions of climate risk categories used by SASB. These categories are not mutually exclusive.

Physical effects

Climate change has a range of current and projected acute (punctuated, unpredictable) and chronic (progressive, predictable) effects on the physical environment. The probability, magnitude, and timing of these impacts are uncertain and will be influenced by geographic location, industry, and capacity for adaptation. Disclosures can help both companies and investors understand their exposure to the physical risks of climate change.

Acute (event-related)

Acute physical risks are associated with the impacts of more frequent and more severe catastrophic weather events (e.g., droughts, flooding, extensive wildfires, greater precipitation, higher wind speeds, etc.). Examples of such impacts may include physical damage to assets, supply chain disruptions, and/or electricity grid disruptions.

Chronic (progressive)

Chronic physical risks could be associated with sustained greenhouse gas emissions into the atmosphere, leading to the progressive impacts of increasing temperatures, changing precipitation patterns, and rising sea levels. Impacts may affect agricultural yields, shift growing seasons and species distribution, cause human disease migration, affect the availability and quality of water resources, and impact coastal residential and commercial real estate and infrastructure.

Some examples of potential negative financial impacts from acute and/or chronic physical effects include:

» **Asset impairment** – long-lived physical asset and natural asset damage and impairment such as premature deterioration or devaluation of agricultural land, coastal real estate, infrastructure located in hurricane zones

» **Cost increase** – short- and medium-term disruptions of operations, disruptions to transportation, supply chains, and distribution chains, increases in insurance premia, as well as long-term adaptation costs

» **Loss of revenue** – work interruptions association with loss of grid power, flooding, or supply chain disruption, as well as productivity loss due to chronic temperature rise

The physical impacts of climate change may present opportunities to some companies. For example, some agricultural companies may experience increased agricultural yields in certain geographic regions, resulting in revenue growth.

Transition to a low-carbon, resilient economy

Transition risk refers to climate risk that manifests itself through shifts in market forces, - including new products and services that support mitigation or adaptation to climate change, as well as direct changes in consumer preferences. Such changes may be connected to GHG emissions intensity of operations and products (e.g., energy intensity of product manufacturing, fuel efficiency of vehicles, energy efficiency of home appliances, end-of-life emissions of products) or water consumption of operations or products (e.g., water intensity of food or beverage production, as well as for manufacturing and power generation, lifecycle water consumption of home appliances, end-of-life contamination of freshwater sources).

The mitigation and adaptation to climate-related impacts may be influenced by the regulatory environment and the geographic location of a company, depending on what physical risks of climate change are present. Therefore, transition risk is often connected to either physical or regulatory risk—or to both. Such connections may exist in a company's direct operations or arise from downstream or upstream relationships in the value chain—e.g., regulatory pressures may prompt automakers to pursue a range of fuel-economy strategies, which can shift demand among auto parts manufacturers toward inputs that can enhance fuel efficiency, as well as among mining and chemicals companies for lithium to produce electric vehicle batteries.

Mitigation responses are those technologies and services that reduce a company's potential contributions to climate change, such as through increased energy efficiency, water efficiency, renewable energy uptake, and the capture or sequestration of carbon dioxide. Adaptation responses include, but are not limited to, infrastructure resiliency efforts and business model shifts (e.g., the introduction of new products and services, and aligning business models with new environmental conditions).

Potential financial impacts from the transition to a low carbon economy include:

» **Revenue loss (due to demand contraction)** – reduced demand for fossil fuels as well as for products and services associated with the fossil fuel value chain

» **Stranded assets** – devaluation or impairment of fossil fuel reserves

» **Revenue growth** – growth in renewable energy, emergence of new industries and products, including carbon capture and sequestration, smart grid technologies, energy-efficient products, infrastructure adaptations, and green chemistry solutions

» **Long-term cost reductions** – operating cost reduction from investments in updated infrastructure and technologies

Shifting consumer demand may put competitive pressure on companies. Thus, the failure to adapt and invest in R&D with the goal of reducing lifecycle impacts of products or services may hinder a company's long-term financial performance. At the same time, companies that can innovate and offer sustainable products and services could see increased revenue and build brand loyalty which could strengthen their pricing power.

Regulatory risk

Regulatory risks may result from a range of legal and regulatory issues associated with climate change. This encompasses all international, national, and subnational targets, mandates, legislation, and regulations to address climate change. It also includes those that establish a price for carbon emissions and compliance with policy-driven responses to climate change such as those that mandate energy, water, and fuel efficiency, regulate greenhouse gas emissions, restrict or mandate specific electricity sources, and/or those that directly incentivise and subsidise certain services and technologies.

This category also encompasses a range of potential impacts that may occur due to legal actions against companies related to climate change. These include action against those deemed liable for the physical effects of climate change, including but not limited to deforestation and water withdrawal (also referred to as "liability risks"), allegations of breach of fiduciary duty by directors and officers, and disputes over the implementation of climate-related regulation.

Regulatory risk directly impacts companies that are subject to legal or regulatory actions, while indirectly it could impact regulatory and compliance costs across a company's value chain.

Potential financial impacts from climate regulation include:

» **Operating costs** – explicit carbon pricing in certain markets and related increase of cost of grid electricity, compliance costs, and/or fines related to climate regulation

» **Revenue growth impacts** – Fossil fuel providers or large greenhouse gas emitters may be denied permits for new projects due to climate considerations. Meanwhile, climate-related incentives such as subsidies and tax credits might afford potential revenue growth for companies that qualify, such as wind and biofuel power producers in certain geographies.

» **Legal expenses or liabilities** – if an entity is alleged to be liable for damages, adaptation, or other costs associated with the physical effects of climate change, failure to adequately disclose climate-related risks, or disputes over compliance with climate-related regulation.

A significant majority of countries around the world have enacted laws and policies to address climate change.[2] These include but are not restricted to limits on carbon emissions from power generators, funding for wind and solar generation, fuel-efficiency standards for vehicle manufacturers, and pricing programs for direct carbon emissions. These policies are all designed to ultimately reduce the amount of greenhouse gases entering the atmosphere by targeting parts of the energy value chain, resulting in a range of financial impacts and regulatory risks across industries.

2 Grantham Research Institute on Climate Change and the Environment, "Policy brief: National laws and policies on climate change adaptation: a global review" (December 2019).

SASB CLIMATE RISK MAP

Table 1 indicates the presence of these three primary types of climate risk (physical, transition, and regulatory risk) in each of the 77 SICS industries, as shown by the shaded boxes. Table 1 draws on relevant disclosure topics from the SASB Standards to present a holistic view of the climate-related risks and opportunities embedded in a typical diversified portfolio.

Table 1. SASB Climate Risk Map

		CLIMATE RISK CATEGORY		
SECTOR	**INDUSTRIES**	**PHYSICAL**	**TRANSITION**	**REGULATORY**
CONSUMER GOODS	Apparel, Accessories & Footwear	■	■	
	Appliance Manufacturing		■	
	Household & Personal Products	■	■	
	Building Products & Furnishings		■	■
	E-Commerce	■	■	
	Multiline and Specialty Retailers & Distributors		■	
	Toys & Sporting Goods			
EXTRACTIVES & MINERALS PROCESSING	Coal Operations	■	■	■
	Construction Materials	■	■	■
	Iron & Steel Producers	■	■	■
	Metals & Mining	■	■	■
	Oil & Gas – Exploration & Production	■	■	■
	Oil & Gas – Midstream			■
	Oil & Gas – Refining & Marketing	■	■	■
	Oil & Gas – Services	■	■	■
FINANCIALS	Asset Management & Custody Activities		■	
	Commercial Banks		■	
	Consumer Finance			
	Insurance	■	■	
	Investment Banking & Brokerage		■	
	Mortgage Finance	■		
	Security & Commodity Exchanges			
FOOD & BEVERAGE	Agricultural Products	■	■	■
	Alcoholic Beverages	■	■	
	Meat, Poultry & Dairy	■		■
	Non-Alcoholic Beverages	■	■	■
	Processed Foods	■	■	
	Food Retailers & Distributors		■	■
	Restaurants		■	■
	Tobacco			
HEALTH CARE	Biotechnology & Pharmaceuticals			
	Health Care Delivery	■	■	
	Health Care Distributors		■	
	Managed Care	■		
	Medical Equipment & Supplies		■	
	Drug Retailers		■	
INFRASTRUCTURE	Electric Utilities & Power Generators	■	■	■
	Engineering & Construction Services	■	■	■
	Gas Utilities & Distributors		■	■
	Home Builders	■	■	■
	Real Estate	■	■	■
	Real Estate Services		■	
	Water Utilities & Services	■	■	■
	Waste Management			■

Table 1. SASB Climate Risk Map (cont.)

SECTOR	INDUSTRIES	CLIMATE RISK CATEGORY: PHYSICAL	TRANSITION	REGULATION
RENEWABLE RESOURCES & ALTERNATIVE ENERGY	Biofuels	■	■	■
	Forestry Management	■		
	Fuel Cells & Industrial Batteries		■	
	Pulp & Paper Products	■	■	■
	Solar Technology & Project Developers	■	■	■
	Wind Technology & Project Developers		■	
RESOURCE TRANSFORMATION	Aerospace & Defence		■	■
	Chemicals	■	■	■
	Containers & Packaging	■	■	■
	Electrical & Electronic Equipment		■	
	Industrial Machinery & Goods		■	■
SERVICES	Advertising & Marketing			
	Casinos & Gaming		■	■
	Education			
	Hotels & Lodging	■	■	■
	Leisure Facilities		■	■
	Media & Entertainment			
	Professional & Commercial Services			
TECHNOLOGY & COMMUNICATIONS	Electronic Manufacturing Services & Original Design Manufacturing	■	■	
	Internet Media & Services	■	■	
	Semiconductors	■	■	■
	Software & IT Services	■	■	
	Telecommunication Services	■	■	
	Hardware		■	
TRANSPORTATION	Airlines			■
	Air Freight & Logistics		■	■
	Automobiles		■	■
	Auto Parts		■	■
	Car Rental & Leasing		■	
	Cruise Lines			■
	Marine Transportation			■
	Rail Transportation			■
	Road Transportation			■
No. of industries impacted by Climate Risk Category		**36**	**57**	**40**

FINANCIAL IMPACT CHANNELS

Although the three types of climate risk identified in Table 1 are helpful in terms of thinking about how climate change affects different industries, business models, or specific companies, financial analysts also require an understanding of how those climate risks could impact companies in a financial sense, including current and future effects on a company's financial condition, operating performance, and its risk profile. The financial implications of climate risk can be grouped into three general categories: income statement impacts, balance sheet impacts, and risk profile impacts. As this publication uses the terms income statement and balance sheet to describe the financial impacts of climate change, it means both current and future impacts on the income statement, balance sheet, and cash flows—not only those that are currently recognised in the financial statements.

Income statement

Revenue impacts

This category includes the impact on revenues and/or future cash inflows from climate-related effects on the company. These may be due to, for example, operational disruptions, changes in demand for products or services, changes in market share or product yield, reputational impacts, legal and regulatory factors, and/ or loss of social license to operate. Revenue may be affected positively or negatively depending on the company or industry.

Operating cost impacts

This category includes the impact on capital expenditures, operating expenses, and/or other cash outflows from climate-related risks. These may be due to changes in the costs of supplies, labor, investments needed to maintain or improve resource efficiency or adjust an entity's energy source mix, investments needed to comply with new regulations, legal expenses, and R&D expenses necessary to respond to competitive and market pressures. It may also include investments needed to repair facilities, improve infrastructure resiliency from exposure to increased storm events, and/or the cost of insurance from such exposure. Costs can be affected either positively (e.g., through increased resource efficiency) or negatively (e.g., CAPEX required to reduce emissions, increased cost of materials, higher insurance premiums, etc.).

Balance sheet impacts

This category comprises effects on the value of assets due to regulatory actions such as carbon pricing, changes in asset value due to the physical effects of climate change, and/or other devaluation of assets due to the transition to a low-carbon, resilient economy. Current assets (e.g., inventory, crops, and livestock) and long-lived physical assets (e.g., coastal properties, infrastructure, and forestland) may be at risk for impairment or devaluation due to increased extreme weather events. Additionally, the amount of capitalised hydrocarbon reserves that are viable for extraction and production may be reduced due to carbon pricing in certain markets and shift in demand to renewable energy sources.

Risk profile impacts

Climate change will have a range of effects on the viability of businesses, depending on their ability to effectively manage climate-related risks and opportunities. These scenarios will impact entities' ability to gain access to debt and equity capital, along with the cost of that capital. Entities that have greater exposure to the physical effects of climate change, fail to manage their transition risks, and insufficiently prepare for or adapt to climate regulations, will likely face debt and equity risk premia. Creditworthiness will erode and interest rates will rise as ratings agencies, investors, insurers, and lenders increasingly consider such climate risks. Certain industries may face "divestment" risks due to investor concerns over their contribution to GHG emissions, as well as due to reputational concerns. Entities better able to manage—and communicate their management of—climate risks and/or those that position themselves to benefit from a low-carbon economy could see higher credit ratings, lower debt financing costs, and lower cost of equity capital.

SASB FINANCIAL IMPACT CHANNEL MAP

Table 2 illustrates the exposure of each of the 77 SICS industries to climate-related impacts through each financial impact channel (i.e., balance sheet, income statement, and risk profile). The potential financial impacts of specific climate-related topics are described at a more granular level in the SASB Standards, which can be found at sasb.org/standards/download.

Table 2. Financial impacts of climate risk

SECTOR	INDUSTRY	INCOME STATEMENT	BALANCE SHEET	RISK PROFILE
CONSUMER GOODS	Apparel, Accessories & Footwear			
	Appliance Manufacturing			
	Household & Personal Products			
	Building Products & Furnishings			
	E-Commerce			
	Multiline and Specialty Retailers & Distributors			
EXTRACTIVES & MINERALS PROCESSING	Coal Operations			
	Construction Materials			
	Iron & Steel Producers			
	Metals & Mining			
	Oil & Gas – Exploration & Production			
	Oil & Gas – Midstream			
	Oil & Gas – Refining & Marketing			
	Oil & Gas – Services			
FINANCIALS	Asset Management & Custody Activities			
	Commercial Banks			
	Insurance			
	Investment Banking & Brokerage			
	Mortgage Finance			
FOOD & BEVERAGE	Agricultural Products			
	Alcoholic Beverages			
	Meat, Poultry & Dairy			
	Non-Alcoholic Beverages			
	Processed Foods			
	Food Retailers & Distributors			
	Restaurants			
HEALTH CARE	Health Care Delivery			
	Health Care Distributors			
	Managed Care			
	Medical Equipment & Supplies			
	Drug Retailers			
INFRASTRUCTURE	Electric Utilities & Power Generators			
	Engineering & Construction Services			
	Gas Utilities & Distributors			
	Home Builders			
	Real Estate			
	Real Estate Services			
	Water Utilities & Services			
	Waste Management			

Table 2. Financial Impacts of Climate Risk (CONT.)

SECTOR	INDUSTRY	INCOME STATEMENT	BALANCE SHEET	RISK PROFILE
RENEWABLE RESOURCES & ALTERNATIVE ENERGY	Biofuels			
	Forestry Management			
	Fuel Cells & Industrial Batteries			
	Pulp & Paper Products			
	Solar Technology & Project Developers			
	Wind Technology & Project Developers			
RESOURCE TRANSFORMATION	Aerospace & Defence			
	Chemicals			
	Containers & Packaging			
	Electrical & Electronic Equipment			
	Industrial Machinery & Goods			
SERVICES	Casinos & Gaming			
	Hotels & Lodging			
	Leisure Facilities			
TECHNOLOGY & COMMUNICATIONS	Electronic Manufacturing Services & Original Design Manufacturing			
	Internet Media & Services			
	Semiconductors			
	Software & IT Services			
	Telecommunication Services			
	Hardware			
TRANSPORTATION	Airlines			
	Air Freight & Logistics			
	Automobiles			
	Auto Parts			
	Car Rental & Leasing			
	Cruise Lines			
	Marine Transportation			
	Rail Transportation			
	Road Transportation			

SASB CLIMATE METRICS TABLE

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

Table 3. SASB Climate-related Disclosure Topics and Metrics by Industry

CONSUMER GOODS

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	Physical Effects	Transition to a Low-Carbon, Resilient Economy	Regulatory Risk
Apparel, Accessories & Footwear Sustainability Accounting Standard	Raw Materials Sourcing	(1) List of priority raw materials; for each priority raw material: (2) environmental or social factor(s) most likely to threaten sourcing, (3) discussion on business risks or opportunities associated with environmental or social factors and (4) management strategy for addressing business risks and opportunities	Discussion and Analysis	n/a	■	■	
		(1) Amount of priority raw materials purchased, by material, and (2) amount of each priority raw material that is certified to a third-party environmental or social standard, by standard	Quantitative	Metric tonnes (t)	■	■	
Appliance Manufacturing	Product Lifecycle Environmental Impacts	Percentage of eligible products by revenue certified to an energy efficiency certification	Quantitative	Percentage (%) by revenue		■	
		Percentage of eligible products by revenue certified to an environmental product lifecycle standard	Quantitative	Percentage (%) by revenue		■	
		Description of efforts to manage products' end-of-life impacts	Discussion and Analysis	n/a		■	
Building Products & Furnishings	Energy Management in Manufacturing	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■		■
	Product Lifecycle Environmental Impacts	Description of efforts to manage product lifecycle impacts and meet demand for sustainable products	Discussion and Analysis	n/a		■	
		(1) Weight of end-of-life material recovered, (2) percentage of recovered materials recycled	Quantitative	Metric tonnes (t), Percentage (%) by weight		■	
	Wood Supply Chain Management	(1) Total weight of wood fibre materials purchased, (2) percentage from third-party certified forestlands, (3) percentage by standard and (4) percentage certified to other wood fibre standards, (5) percentage by standard	Quantitative	Metric tonnes (t), Percentage (%) by weight		■	
E-Commerce	Hardware Infrastructure Energy & Water Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)		■	
		(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 (%)	■		
		Discussion of the integration of environmental considerations into strategic planning for data centre needs	Discussion and Analysis	n/a	■	■	
	Product Packaging & Distribution	Total greenhouse gas (GHG) footprint of product shipments	Quantitative	Metric tonnes (t) CO_2-e		■	
		Discussion of strategies to reduce the environmental impact of product delivery	Discussion and Analysis	n/a		■	
Household & Personal Products	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 (%)	■		
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	■	■	
	Environmental & Social Impacts of Palm Oil Supply Chain	Amount of palm oil sourced, percentage certified through the Roundtable on Sustainable Palm Oil (RSPO) supply chains as (a) Identity Preserved, (b) Segregated, (c) Mass Balance or (d) Book & Claim	Quantitative	Metric tonnes (t), Percentage (%)	■	■	
Multiline and Specialty Retailers & Distributors	Energy Management in Retail & Distribution	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)		■	

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

EXTRACTIVES & MINERALS PROCESSING

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Construction Materials	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)	Regulatory Risk
		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	Regulatory Risk
	Air Quality	Air emissions of the following pollutants: (1) NO_x (excluding N_2O), (2) SO_x, (3) particulate matter (PM10), (4) dioxins/furans, (5) volatile organic compounds (VOCs), (6) polycyclic aromatic hydrocarbons (PAHs) and (7) heavy metals	Quantitative	Metric tonnes (t)	Transition to a Low-Carbon, Resilient Economy
	Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage alternative and (4) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	Transition to a Low-Carbon, Resilient Economy; Regulatory Risk
	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 (%)	Physical Effects
	Waste Management	Amount of waste generated, percentage hazardous and percentage recycled	Quantitative	Metric tonnes (t), Percentage (%)	Physical Effects
	Product Innovation	Percentage of products that qualify for credits in sustainable building design and construction certifications	Quantitative	Percentage (%) by annual sales revenue	Transition to a Low-Carbon, Resilient Economy
		Total addressable market and share of market for products that reduce energy, water or material impacts during usage or production	Quantitative	Presentation currency, Percentage (%)	Transition to a Low-Carbon, Resilient Economy
Coal Operations	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)	Regulatory Risk
		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	Regulatory Risk
	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 (%)	Physical Effects
		Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	Number	Physical Effects
	Reserves Valuation & Capital Expenditures	Sensitivity of coal reserve levels to future price projection scenarios that account for a price on carbon emissions	Quantitative	Million metric tonnes (Mt)	Transition to a Low-Carbon, Resilient Economy; Regulatory Risk
		Estimated carbon dioxide emissions embedded in proven coal reserves	Quantitative	Metric tonnes (t) CO_2-e	Transition to a Low-Carbon, Resilient Economy; Regulatory Risk
		Discussion of how price and demand for coal or climate regulation influence the capital expenditure strategy for exploration, acquisition and development of assets	Discussion and Analysis	n/a	Transition to a Low-Carbon, Resilient Economy; Regulatory Risk
Oil & Gas – Exploration & Production	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes CO_2-e (t), Percentage (%)	Regulatory Risk
		Amount of gross global Scope 1 emissions from: (1) flared hydrocarbons, (2) other combustion, (3) process emissions, (4) other vented emissions and (5) fugitive emissions	Quantitative	Metric tonnes CO_2-e	Regulatory Risk
		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	Regulatory Risk
	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 (%)	Physical Effects
		Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water	Quantitative	Thousand cubic metres (m^3), Percentage (%), Metric tonnes (t)	Physical Effects

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

EXTRACTIVES & MINERALS PROCESSING

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	Physical Effects	Transition to a Low-Carbon, Resilient Economy	Regulatory Risk
Oil & Gas – Exploration & Production	Water Management	Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used	Quantitative	Percentage (%)	■		
		Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline	Quantitative	Percentage (%)	■		
	Reserves Valuation & Capital Expenditures	Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	Quantitative	Million barrels (MMbbls), Million standard cubic feet (MMscf)		■	■
		Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves	Quantitative	Metric tonnes (t) CO_2-e		■	■
		Amount invested in renewable energy, revenue generated by renewable energy sales	Quantitative	Presentation currency		■	■
		Discussion of how price and demand for hydrocarbons or climate regulation influence the capital expenditure strategy for exploration, acquisition and development of assets	Discussion and Analysis	n/a		■	■
Iron & Steel Producers	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)			■
		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			■
	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)		■	■
		(1) Total fuel consumed, (2) percentage coal, (3) percentage natural gas and (4) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)		■	■
	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 (%)	■		
	Supply Chain Management	Discussion of the process for managing iron ore or coking coal sourcing risks arising from environmental and social issues	Discussion and Analysis	n/a		■	
Oil & Gas – Midstream	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)			■
		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			■
Metals & Mining	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)			■
		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			■
	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)		■	■
	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 (%)	■		
		Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	Number	■		

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

EXTRACTIVES & MINERALS PROCESSING

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Oil & Gas – Refining & Marketing	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)	■
		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	■
	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 (%)	■
Oil & Gas – Refining & Marketing	Product Specifications & Clean Fuel Blends	Total addressable market and share of market for advanced biofuels and associated infrastructure	Quantitative	Presentation currency, Percentage (%)	■ ■
		Volumes of renewable fuels for fuel blending: (1) net amount produced, (2) net amount purchased	Quantitative	Barrels of oil equivalent (BOE)	■ ■
Oil & Gas – Services	Emissions Reduction Services & Fuels Management	Total fuel consumed, percentage renewable, percentage used in: (1) on-road equipment and vehicles and (2) off-road equipment	Quantitative	Gigajoules (GJ), Percentage (%)	■
		Discussion of strategy or plans to address air emissions-related risks, opportunities and impacts	Discussion and Analysis	n/a	■
		Percentage of engines in service that comply with the highest level of emissions standards for non-road diesel engine emissions	Quantitative	Percentage (%)	■
	Water Management Services	(1) Total volume of water handled in operations, (2) percentage recycled	Quantitative	Thousand cubic metres (m^3), Percentage (%)	■ ■
		Discussion of strategy or plans to address water consumption and disposal-related risks, opportunities and impacts	Discussion and Analysis	n/a	■ ■

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

FOOD & BEVERAGE

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Alcoholic Beverages	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
	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 (%)	
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	
	Environmental & Social Impacts of Ingredient Supply Chain	Suppliers' social and environmental responsibility audit (1) non-conformance rate and (2) associated corrective action rate for (a) major and (b) minor non-conformances	Quantitative	Rate	
	Ingredient Sourcing	Percentage of beverage ingredients sourced from regions with High or Extremely High Baseline Water Stress	Quantitative	Percentage (%) by cost	
		List of priority beverage ingredients and discussion of sourcing risks related to environmental and social considerations	Discussion and Analysis	n/a	
Agricultural Products	Greenhouse Gas Emissions	Gross global Scope 1 emissions	Quantitative	Metric tonnes (t) CO_2-e	
		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	
		Fleet fuel consumed, percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
	Energy Management	(1) Operational energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
	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 (%)	
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	
		Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	Number	
	Ingredient Sourcing	Identification of principal crops and description of risks and opportunities presented by climate change	Discussion and Analysis	n/a	
		Percentage of agricultural products sourced from regions with High or Extremely High Baseline Water Stress	Quantitative	Percentage (%) by cost	
Food Retailers & Distributors	Fleet Fuel Management	Fleet fuel consumed, percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
	Air Emissions from Refrigeration	Gross global Scope 1 emissions from refrigerants	Quantitative	Metric tonnes (t) CO_2-e	
		Percentage of refrigerants consumed with zero ozone-depleting potential	Quantitative	Percentage (%) by weight	
		Average refrigerant emissions rate	Quantitative	Percentage (%)	
	Energy Management	(1) Operational energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
	Management of Environmental & Social Impacts in the Supply Chain	Revenue from products third-party certified to environmental or social sustainability sourcing standards	Quantitative	Presentation currency	
		Discussion of strategy to manage environmental and social risks within the supply chain, including animal welfare	Discussion and Analysis	n/a	
		Discussion of strategies to reduce the environmental impact of packaging	Discussion and Analysis	n/a	
Meat, Poultry & Dairy	Greenhouse Gas Emissions	Gross global Scope 1 emissions	Quantitative	Metric tonnes (t) CO_2-e	

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

FOOD & BEVERAGE

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Meat, Poultry & Dairy	Greenhouse Gas Emissions	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	■
	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■
	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 (%)	■
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	■
		Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	Number	■
	Land Use & Ecological Impacts	Amount of animal litter and manure generated, percentage managed according to a nutrient management plan	Quantitative	Metric tonnes (t), Percentage (%)	■
		Percentage of pasture and grazing land managed to conservation plan criteria	Quantitative	Percentage (%) by hectares	■
		Animal protein production from confined animal feeding operations	Quantitative	Metric tonnes (t)	■
	Animal & Feed Sourcing	Percentage of animal feed sourced from regions with High or Extremely High Baseline Water Stress	Quantitative	Percentage (%) by weight	■
		Percentage of contracts with producers located in regions with High or Extremely High Baseline Water Stress	Quantitative	Percentage (%) by contract value	■
		Discussion of strategy to manage opportunities and risks to feed sourcing and livestock supply presented by climate change	Discussion and Analysis	n/a	■
Non-Alcoholic Beverages	Fleet Fuel Management	Fleet fuel consumed, percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■
	Energy Management	(1) Operational energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■
	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 (%)	■
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	■
	Environmental & Social Impacts of Ingredient Supply Chain	Suppliers' social and environmental responsibility audit (1) non-conformance rate and (2) associated corrective action rate for (a) major and (b) minor non-conformances	Quantitative	Rate	■
	Ingredient Sourcing	Percentage of beverage ingredients sourced from regions with High or Extremely High Baseline Water Stress	Quantitative	Percentage (%) by cost	■
		List of priority beverage ingredients and discussion of sourcing risks related to environmental and social considerations	Discussion and Analysis	n/a	■
Processed Foods	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■
	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 (%)	■
		Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	Number	■
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	■
	Environmental & Social Impacts of Ingredient Supply Chain	Percentage of food ingredients sourced that are certified to third-party environmental or social standards, and percentages by standard	Quantitative	Percentage (%) by cost	■

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

FOOD & BEVERAGE

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Processed Foods	Environmental & Social Impacts of Ingredient Supply Chain	Suppliers' social and environmental responsibility audit (1) non-conformance rate and (2) associated corrective action rate for (a) major and (b) minor non-conformances	Quantitative	Rate	Transition
	Ingredient Sourcing	Percentage of food ingredients sourced from regions with High or Extremely High Baseline Water Stress	Quantitative	Percentage (%) by cost	Physical, Transition
		List of priority food ingredients and discussion of sourcing risks related to environmental and social considerations	Discussion and Analysis	n/a	Physical, Transition
Restaurants	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	Transition, Regulatory
	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 (%)	Physical
	Supply Chain Management & Food Sourcing	Percentage of food purchased that (1) meets environmental and social sourcing standards, and (2) is certified to third-party environmental or social standards	Quantitative	Percentage (%) by cost	Transition
		Discussion of strategy to manage environmental and social risks within the supply chain, including animal welfare	Discussion and Analysis	n/a	Transition

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

FINANCIALS

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Asset Management & Custody Activities	Incorporation of Environmental, Social, and Governance Factors in Investment Management & Advisory	Amount of assets under management, by asset class, that employ (1) integration of environmental, social, and governance (ESG) issues, (2) sustainability themed investing and (3) screening	Quantitative	Presentation currency	■
		Description of approach to incorporation of environmental, social and governance (ESG) factors in investment or wealth management processes and strategies	Discussion and Analysis	n/a	■
		Description of proxy voting and investee engagement policies and procedures	Discussion and Analysis	n/a	■
	Financed Emissions	Absolute gross financed emissions, disaggregated by (1) Scope 1, (2) Scope 2 and (3) Scope 3	Quantitative	Metric tonnes (t) CO_2-e	■
		Total amount of assets under management (AUM) included in the financed emissions disclosure	Quantitative	Presentation currency	■
		Percentage of total assets under management (AUM) included in the financed emissions calculation	Quantitative	Percentage (%)	■
		Description of the methodology used to calculate financed emissions	Discussion and Analysis	n/a	■
Commercial Banks	Incorporation of Environmental, Social, and Governance Factors in Credit Analysis	Description of approach to incorporation of environmental, social and governance (ESG) factors in credit analysis	Discussion and Analysis	n/a	■
	Financed Emissions	Absolute gross financed emissions, disaggregated by (1) Scope 1, (2) Scope 2 and (3) Scope 3	Quantitative	Metric tonnes (t) CO_2-e	■
		Gross exposure for each industry by asset class	Quantitative	Presentation currency	■
		Percentage of gross exposure included in the financed emissions calculation	Quantitative	Percentage %	■
		Description of the methodology used to calculate financed emissions	Discussion and Analysis	n/a	■
Investment Banking & Brokerage	Incorporation of Environmental, Social, and Governance Factors in Investment Banking & Brokerage Activities	Revenue from (1) underwriting, (2) advisory and (3) securitisation transactions incorporating integration of environmental, social and governance (ESG) factors, by industry	Quantitative	Presentation currency	■
		(1) Number and (2) total value of investments and loans incorporating integration of environmental, social and governance (ESG) factors, by industry	Quantitative	Number, Presentation currency	■
		Description of approach to incorporation of environmental, social and governance (ESG) factors in investment banking and brokerage activities	Discussion and Analysis	n/a	■
Insurance	Incorporation of Environmental, Social and Governance Factors in Investment Management	Description of approach to incorporation of environmental, social and governance (ESG) factors in investment management processes and strategies	Discussion and Analysis	n/a	■
	Policies Designed to Incentivise Responsible Behaviour	Net premiums written related to energy efficiency and low carbon technology	Quantitative	Presentation currency	■
		Discussion of products or product features that incentivise health, safety or environmentally responsible actions or behaviours	Discussion and Analysis	n/a	■
	Financed Emissions	Absolute gross financed emissions, disaggregated by (1) Scope 1, (2) Scope 2 and (3) Scope 3	Quantitative	Metric tonnes (t) CO_2-e	■
		Gross exposure for each industry by asset class	Quantitative	Presentation currency	■

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

FINANCIALS

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Insurance	Financed Emissions	Percentage of gross exposure included in the financed emissions calculation	Quantitative	Percentage %	■
		Description of the methodology used to calculate financed emissions	Discussion and Analysis	n/a	■
	Physical Risk Exposure	Probable Maximum Loss (PML) of insured products from weather-related natural catastrophes	Quantitative	Presentation currency	■
		Total amount of monetary losses attributable to insurance pay-outs from (1) modelled natural catastrophes and (2) non-modelled natural catastrophes, by type of event and geographical segment (net and gross of reinsurance)	Quantitative	Presentation currency	■
		Description of approach to incorporation of environmental risks into (1) the underwriting process for individual contracts and (2) the management of entity-level risks and capital adequacy	Discussion and Analysis	n/a	■
Mortgage Finance	Environmental Risk to Mortgaged Properties	(1) Number and (2) value of mortgage loans in 100-year flood zones	Quantitative	Number, Presentation currency	■
		(1) Total expected loss and (2) Loss Given Default (LGD) attributable to mortgage loan default and delinquency because of weather-related natural catastrophes, by geographical region	Quantitative	Presentation currency, Percentage (%)	■
		Description of how climate change and other environmental risks are incorporated into mortgage origination and underwriting	Discussion and Analysis	n/a	■

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

HEALTH CARE

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Health Care Distributors	Fleet Fuel Management	Payload fuel economy	Quantitative	Litres/RTK	Transition
		Description of efforts to reduce the environmental impact of logistics	Discussion and Analysis	n/a	Transition
Drug Retailers	Energy Management in Retail	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	Transition
Health Care Delivery	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	Transition
	Waste Management	Total amount of medical waste: percentage (a) incinerated, (b) recycled or treated and (c) landfilled	Quantitative	Metric tonnes (t)	Transition
		Total amount of: (1) hazardous and (2) non-hazardous pharmaceutical waste, percentage (a) incinerated, (b) recycled or treated and (c) landfilled	Quantitative	Metric tonnes (t), Percentage (%)	Transition
	Climate Change Impacts on Human Health & Infrastructure	Description of policies and practices to address: (1) the physical risks because of an increased frequency and intensity of extreme weather events, (2) changes in the morbidity and mortality rates of illnesses and diseases associated with climate change and (3) emergency preparedness and response	Discussion and Analysis	n/a	Physical
Managed Care	Climate Change Impacts on Human Health	Discussion of the strategy to address the effects of climate change on business operations and how specific risks presented by changes in the geographical incidence, morbidity and mortality of illnesses and diseases are incorporated into risk models	Discussion and Analysis	n/a	Physical
	Product Design & Lifecycle Management	Discussion of process to assess and manage environmental and human health considerations associated with chemicals in products, and meet demand for sustainable products	Discussion and Analysis	n/a	Transition
		Total amount of products accepted for take-back and reused, recycled or donated, broken down by: (1) devices and equipment and (2) supplies	Quantitative	Metric tonnes (t)	Transition

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

INFRASTRUCTURE

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Engineering & Construction Services	Environmental Impacts of Project Development	Number of incidents of non-compliance with environmental permits, standards and regulations	Quantitative	Number	Regulatory Risk
		Discussion of processes to assess and manage environmental risks associated with project design, siting and construction	Discussion and Analysis	n/a	Regulatory Risk
	Structural Integrity & Safety	Amount of defect- and safety-related rework costs	Quantitative	Presentation currency	Physical Effects, Regulatory Risk
		Total amount of monetary losses as a result of legal proceedings associated with defect- and safety-related incidents	Quantitative	Presentation currency	Physical Effects, Regulatory Risk
	Lifecycle Impacts of Buildings & Infrastructure	Number of (1) commissioned projects certified to a third-party multi-attribute sustainability standard and (2) active projects seeking such certification	Quantitative	Number	Transition to a Low-Carbon, Resilient Economy
		Discussion of process to incorporate operational-phase energy and water efficiency considerations into project planning and design	Discussion and Analysis	n/a	Transition to a Low-Carbon, Resilient Economy
	Climate Impacts of Business Mix	Amount of backlog for (1) hydrocarbon-related projects and (2) renewable energy projects	Quantitative	Presentation currency	Transition to a Low-Carbon, Resilient Economy
		Amount of backlog cancellations associated with hydrocarbon-related projects	Quantitative	Presentation currency	Transition to a Low-Carbon, Resilient Economy
		Amount of backlog for non-energy projects associated with climate change mitigation	Quantitative	Presentation currency	Transition to a Low-Carbon, Resilient Economy
Electric Utilities & Power Generators	Greenhouse Gas Emissions & Energy Resource Planning	(1) Gross global Scope 1 emissions, percentage covered under (2) emissions-limiting regulations and (3) emissions-reporting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)	Regulatory Risk
		Greenhouse gas (GHG) emissions associated with power deliveries	Quantitative	Metric tonnes (t) CO_2-e	Regulatory Risk
		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	Regulatory Risk
	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 (%)	Physical Effects, Regulatory Risk
		Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	Number	Physical Effects, Regulatory Risk
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	Physical Effects, Regulatory Risk
	End-Use Efficiency & Demand	Percentage of electric load served by smart grid technology	Quantitative	Percentage (%) by megawatt hours (MWh)	Transition to a Low-Carbon, Resilient Economy, Regulatory Risk
		Customer electricity savings from efficiency measures, by market	Quantitative	Megawatt hours (MWh)	Transition to a Low-Carbon, Resilient Economy, Regulatory Risk
	Nuclear Safety & Emergency Management	Total number of nuclear power units, broken down by results of most recent independent safety review	Quantitative	Number	Physical Effects
		Description of efforts to manage nuclear safety and emergency preparedness	Discussion and Analysis	n/a	Physical Effects
	Grid Resiliency	Number of incidents of non-compliance with physical or cybersecurity standards or regulations	Quantitative	Number	Physical Effects
		(1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI), and (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	Quantitative	Minutes, Number	Physical Effects

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

INFRASTRUCTURE

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Gas Utilities & Distributors	End-Use Efficiency	Customer gas savings from efficiency measures, by market	Quantitative	Million British Thermal Units (MMBtu)	Transition, Regulatory
	Integrity of Gas Delivery Infrastructure	Number of (1) reportable pipeline incidents, (2) corrective actions received and (3) violations of pipeline safety statutes	Quantitative	Number	Regulatory
		Percentage of distribution pipeline that is (1) cast or wrought iron and (2) unprotected steel	Quantitative	Percentage (%) by length	Regulatory
		Percentage of gas (1) transmission and (2) distribution pipelines inspected	Quantitative	Percentage (%) by length	Regulatory
		Description of efforts to manage the integrity of gas delivery infrastructure, including risks related to safety and emissions	Discussion and Analysis	n/a	Regulatory
Home Builders	Land Use & Ecological Impacts	Number of (1) lots and (2) homes delivered on redevelopment sites	Quantitative	Number	Regulatory
		Number of (1) lots and (2) homes delivered in regions with High or Extremely High Baseline Water Stress	Quantitative	Number	Regulatory
		Total amount of monetary losses as a result of legal proceedings associated with environmental regulations	Quantitative	Presentation currency	Regulatory
		Discussion of process to integrate environmental considerations into site selection, site design and site development and construction	Discussion and Analysis	n/a	Regulatory
	Design for Resource Efficiency	(1) Number of homes that obtained a certified residential energy efficiency rating and (2) average rating	Quantitative	Number, Rating	Transition
		Percentage of installed water fixtures certified to a water efficiency standard	Quantitative	Percentage (%)	Transition
		Number of homes delivered certified to a third-party multi-attribute green building standard	Quantitative	Number	Transition
		Description of risks and opportunities related to incorporating resource efficiency into home design, and how benefits are communicated to customers	Discussion and Analysis	n/a	Transition
	Climate Change Adaptation	Number of lots located in 100-year flood zones	Quantitative	Number	Physical, Transition
		Description of climate change risk exposure analysis, degree of systematic portfolio exposure, and strategies for mitigating risks	Discussion and Analysis	n/a	Physical, Transition
Real Estate	Energy Management	Energy consumption data coverage as a percentage of total floor area, by property sector	Quantitative	Percentage (%) by floor area	Transition, Regulatory
		(1) Total energy consumed by portfolio area with data coverage, (2) percentage grid electricity and (3) percentage renewable, by property sector	Quantitative	Gigajoules (GJ), Percentage (%)	Transition, Regulatory
		Like-for-like percentage change in energy consumption for the portfolio area with data coverage, by property sector	Quantitative	Percentage (%)	Transition, Regulatory
		Percentage of eligible portfolio that (1) has an energy rating and (2) is certified to ENERGY STAR, by property sector	Quantitative	Percentage (%) by floor area	Transition, Regulatory
		Description of how building energy management considerations are integrated into property investment analysis and operational strategy	Discussion and Analysis	n/a	Transition, Regulatory
	Water Management	Water withdrawal data coverage as a percentage of (1) total floor area and (2) floor area in regions with High or Extremely High Baseline Water Stress, by property sector	Quantitative	Percentage (%) by floor area	Physical, Regulatory
		(1) Total water withdrawn by portfolio area with data coverage and (2) percentage in regions with High or Extremely High Baseline Water Stress, by property sector	Quantitative	Thousand cubic metres (m^3), Percentage (%)	Physical, Regulatory
		Like-for-like percentage change in water withdrawn for portfolio area with data coverage, by property sector	Quantitative	Percentage (%)	Physical, Regulatory

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

INFRASTRUCTURE

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Real Estate	Water Management	Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	Physical, Regulatory
	Management of Tenant Sustainability Impacts	(1) Percentage of new leases that contain a cost recovery clause for resource efficiency-related capital improvements and (2) associated leased floor area, by property sector	Quantitative	Percentage (%) by floor area, Square metres (m²)	Transition
		Percentage of tenants that are separately metered or submetered for (1) grid electricity consumption and (2) water withdrawals, by property sector	Quantitative	Percentage (%) by floor area	Transition
		Discussion of approach to measuring, incentivising and improving sustainability impacts of tenants	Discussion and Analysis	n/a	Transition
	Climate Change Adaptation	Area of properties located in 100-year flood zones, by property sector	Quantitative	Square metres (m²)	Physical
		Description of climate change risk exposure analysis, degree of systematic portfolio exposure, and strategies for mitigating risks	Discussion and Analysis	n/a	Physical
Real Estate Services	Sustainability Services	Revenue from energy and sustainability services	Quantitative	Presentation currency	Transition
		(1) Floor area and (2) number of buildings under management provided with energy and sustainability services	Quantitative	Square metres (m²), Number	Transition
		(1) Floor area and (2) number of buildings under management that obtained an energy rating	Quantitative	Square metres (m²), Number	Transition
Waste Management	Greenhouse Gas Emissions	(1) Gross global Scope 1 emissions, percentage covered under (2) emissions-limiting regulations and (3) emissions-reporting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)	Regulatory
		(1) Total landfill gas generated, (2) percentage flared and (3) percentage used for energy	Quantitative	Million British Thermal Units (MMBtu), Percentage (%)	Regulatory
		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	Regulatory
	Fleet Fuel Management	(1) Fleet fuel consumed, (2) percentage natural gas and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	Regulatory
		Percentage of alternative fuel vehicles in fleet	Quantitative	Percentage (%)	Regulatory
Water Utilities & Services	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	Transition
	Distribution Network Efficiency	Water main replacement rate	Quantitative	Rate	Physical
		Volume of non-revenue real water losses	Quantitative	Thousand cubic metres (m³)	Physical
	End-Use Efficiency	Percentage of water utility revenue from rate structures designed to promote conservation and revenue resilience	Quantitative	Percentage (%)	Transition, Regulatory
		Customer water savings from efficiency measures, by market	Quantitative	Cubic metres (m³)	Transition, Regulatory
	Water Supply Resilience	Total water sourced from regions with High or Extremely High Baseline Water Stress; percentage purchased from a third party	Quantitative	Thousand cubic metres (m³), Percentage (%)	Physical
		Volume of recycled water delivered to customers	Quantitative	Thousand cubic metres (m³)	Physical
		Discussion of strategies to manage risks associated with the quality and availability of water resources	Discussion and Analysis	n/a	Physical
	Network Resiliency & Impacts of Climate Change	Wastewater treatment capacity located in 100-year flood zones	Quantitative	Cubic metres (m³) per day	Physical

■ Physical Effects ■ Transition to a Low-Carbon, Resilient Economy ■ Regulatory Risk

INFRASTRUCTURE

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Water Utilities & Services	Network Resiliency & Impacts of Climate Change	(1) Number and (2) volume of sanitary sewer overflows (SSO) and (3) percentage of volume recovered	Quantitative	Number, Cubic metres (m^3), Percentage (%)	■
		(1) Number of unplanned service disruptions and (2) customers affected, each by duration category	Quantitative	Number	■
		Description of efforts to identify and manage risks and opportunities related to the impact of climate change on distribution and wastewater infrastructure	Discussion and Analysis	n/a	■

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

RENEWABLE RESOURCES & ALTERNATIVE ENERGY

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Biofuels	Water Management in Manufacturing	(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 (%)	Physical
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	Physical
		Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	Number	Physical
	Lifecycle Emissions Balance	Lifecycle greenhouse gas (GHG) emissions, by biofuel type	Quantitative	Grammes of CO_2-e per megajoule (MJ)	Transition, Regulatory
	Sourcing & Environmental Impacts of Feedstock Production	Discussion of strategy to manage risks associated with environmental impacts of feedstock production	Discussion and Analysis	n/a	Physical, Regulatory
		Percentage of biofuel production third-party certified to an environmental sustainability standard	Quantitative	Percentage (%) of litres	Physical, Regulatory
	Management of the Legal & Regulatory Environment	Amount of subsidies received through government programmes	Quantitative	Presentation currency	Regulatory
		Discussion of corporate positions related to government regulations or policy proposals that address environmental and social factors affecting the industry	Discussion and Analysis	n/a	Regulatory
Fuel Cells & Industrial Batteries	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	Transition
	Product Efficiency	Average storage capacity of batteries, by product application and technology type	Quantitative	Specific energy (Wh/kg)	Transition
		Average energy efficiency of fuel cells as (1) electrical efficiency and (2) thermal efficiency, by product application and technology type	Quantitative	Percentage (%)	Transition
		Average battery efficiency as coulombic efficiency, by product application and technology type	Quantitative	Percentage (%)	Transition
		Average operating lifetime of fuel cells, by product application and technology type	Quantitative	Hours (h)	Transition
		Average operating lifetime of batteries, by product application and technology type	Quantitative	Number of cycles	Transition
Forestry Management	Ecosystem Services & Impacts	Area of forestland certified to a third-party forest management standard, percentage certified to each standard	Quantitative	Hectares (ha), Percentage (%)	Physical
		Area of forestland with protected conservation status	Quantitative	Hectares (ha)	Physical
		Area of forestland in endangered species habitat	Quantitative	Hectares (ha)	Physical
		Description of approach to optimising opportunities from ecosystem services provided by forestlands	Discussion and Analysis	n/a	Physical
	Climate Change Adaptation	Description of strategy to manage opportunities for and risks to forest management and timber production presented by climate change	Discussion and Analysis	n/a	Physical
Pulp & Paper Products	Greenhouse Gas Emissions	Gross global Scope 1 emissions	Quantitative	Metric tonnes (t) CO_2-e	Regulatory
		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	Transition
	Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage from biomass, (4) percentage from other renewable energy and (5) total self-generated energy	Quantitative	Gigajoules (GJ), Percentage (%)	Transition
	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 (%)	Physical
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	Physical

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

RENEWABLE RESOURCES & ALTERNATIVE ENERGY

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Pulp & Paper Products	Supply Chain Management	Percentage of wood fibre sourced from (1) third-party certified forestlands and percentage to each standard and (2) meeting other fibre sourcing standards and percentage to each standard	Quantitative	Percentage (%) by weight	■ ■
		Amount of recycled and recovered fibre procured	Quantitative	Metric tonnes (t)	■ ■
Solar Technology & Project Developers	Energy Management in Manufacturing	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■
	Water Management in Manufacturing	(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 (%)	■
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	■
	Management of Energy Infrastructure Integration & Related Regulations	Description of risks associated with integration of solar energy into existing energy infrastructure and discussion of efforts to manage those risks	Discussion and Analysis	n/a	■ ■
		Description of risks and opportunities associated with energy policy and its impact on the integration of solar energy into existing energy infrastructure	Discussion and Analysis	n/a	■ ■
Wind Technology & Project Developers	Materials Efficiency	Top five materials consumed, by weight	Quantitative	Metric tonnes (t)	■
		Average top head mass per turbine capacity, by wind turbine class	Quantitative	Metric tonnes per megawatts (t/MW)	■
		Description of approach to optimise materials efficiency of wind turbine design	Discussion and Analysis	n/a	■

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

RESOURCE TRANSFORMATION

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Aerospace & Defence	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
	Fuel Economy & Emissions in Use-phase	Revenue from alternative energy-related products	Quantitative	Presentation currency	
		Description of approach and discussion of strategy to address fuel economy and greenhouse gas (GHG) emissions of products	Discussion and Analysis	n/a	
Chemicals	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)	
		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	
	Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable and (4) total self-generated energy	Quantitative	Gigajoules (GJ), Percentage (%)	
	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 (%)	
		Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	Number	
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	
	Product Design for Use-phase Efficiency	Revenue from products designed for use-phase resource efficiency	Quantitative	Presentation currency	
Containers & Packaging	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Quantitative	Metric tonnes (t) CO_2-e, Percentage (%)	
		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	
	Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable and (4) total self-generated energy	Quantitative	Gigajoules (GJ), Percentage (%)	
	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 (%)	
		Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	n/a	
		Number of incidents of non-compliance associated with water quality permits, standards and regulations	Quantitative	Number	
		Amount of hazardous waste generated, percentage recycled	Quantitative	Metric tonnes (t), Percentage (%)	
	Supply Chain Management	Total wood fibre procured; percentage from certified sources	Quantitative	Metric tonnes (t), Percentage (%)	
		Total aluminium purchased; percentage from certified sources	Quantitative	Metric tonnes (t), Percentage (%)	
Electrical & Electronic Equipment	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
	Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	Percentage (%) by revenue	
		Percentage of eligible products, by revenue, certified to an energy efficiency certification	Quantitative	Percentage (%) by revenue	
		Revenue from renewable energy-related and energy efficiency-related products	Quantitative	Presentation currency	

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

RESOURCE TRANSFORMATION

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Industrial Machinery & Goods	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■
	Fuel Economy & Emissions in Use-phase	Sales-weighted fleet fuel efficiency for medium- and heavy-duty vehicles	Quantitative	Litres per 100 tonne-kilometres	■ ■
		Sales-weighted fuel efficiency for non-road equipment	Quantitative	Litres per hour	■ ■
		Sales-weighted fuel efficiency for stationary generators	Quantitative	Kilojoules per litre	■ ■
		Sales-weighted emissions of (1) nitrogen oxides (NO_x) and (2) particulate matter (PM) for: (a) marine diesel engines, (b) locomotive diesel engines, (c) on-road medium- and heavy-duty engines and (d) other non-road diesel engines	Quantitative	Grammes per kilojoule	■ ■

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

SERVICES

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Casinos & Gaming	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■ ■
Hotels & Lodging	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■ ■
	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 (%)	■
	Climate Change Adaptation	Number of lodging facilities located in 100-year flood zones	Quantitative	Number	■
Leisure Facilities	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■ ■

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

TECHNOLOGY & COMMUNICATIONS

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Electronic Manufacturing Services & Original Design Manufacturing	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 (%)	
	Product Lifecycle Management	Weight of end-of-life products and e-waste recovered; percentage recycled	Quantitative	Metric tonnes (t), Percentage (%)	
Hardware	Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	Percentage (%)	
		Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	Quantitative	Percentage (%)	
		Percentage of eligible products, by revenue, certified to an energy efficiency certification	Quantitative	Percentage (%)	
		Weight of end-of-life products and e-waste recovered; percentage recycled	Quantitative	Metric tonnes (t), Percentage (%)	
Internet Media & Services	Environmental Footprint of Hardware Infrastructure	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
		(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 (%)	
		Discussion of the integration of environmental considerations into strategic planning for data centre needs	Discussion and Analysis	n/a	
Semiconductors	Greenhouse Gas Emissions	(1) Gross global Scope 1 emissions and (2) amount of total emissions from perfluorinated compounds	Quantitative	Metric tonnes (t) CO_2-e	
		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	
	Energy Management in Manufacturing	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
	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 (%)	
	Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	Quantitative	Percentage (%)	
		Processor energy efficiency at a system-level for: (1) servers, (2) desktops and (3) laptops	Quantitative	Various, by product category	
Software & IT Services	Environmental Footprint of Hardware Infrastructure	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
		(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 (%)	
		Discussion of the integration of environmental considerations into strategic planning for data centre needs	Discussion and Analysis	n/a	
	Managing Systemic Risks from Technology Disruptions	Number of (1) performance issues and (2) service disruptions; (3) total customer downtime	Quantitative	Number, Days	
		Description of business continuity risks related to disruptions of operations	Discussion and Analysis	n/a	
Telecommunication Services	Environmental Footprint of Operations	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	
	Managing Systemic Risks from Technology Disruptions	(1) System average interruption duration, (2) system average interruption frequency and (3) customer average interruption duration	Quantitative	Minutes, Number	
	Managing Systemic Risks from Technology Disruptions	Discussion of systems to provide unimpeded service during service disruptions	Discussion and Analysis	n/a	

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

TRANSPORTATION

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Air Freight & Logistics	Greenhouse Gas Emissions	Gross global Scope 1 emissions	Quantitative	Metric tonnes (t) CO_2-e	■
		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	■
		Fuel consumed by (1) road transport, percentage (a) natural gas and (b) renewable, and (2) air transport, percentage (a) alternative and (b) sustainable	Quantitative	Gigajoules (GJ), Percentage (%)	■
	Supply Chain Management	Total greenhouse gas (GHG) footprint across transport modes	Quantitative	Metric tonnes (t) CO_2-e per ton-kilometre	■ ■
Airlines		Gross global Scope 1 emissions	Quantitative	Metric tonnes (t) CO_2-e	■ ■
		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	■ ■
		(1) Total fuel consumed, (2) percentage alternative and (3) percentage sustainable	Quantitative	Gigajoules (GJ), Percentage (%)	■
Auto Parts	Energy Management	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■
	Design for Fuel Efficiency	Revenue from products designed to increase fuel efficiency or reduce emissions	Quantitative	Presentation currency	■ ■
Automobiles	Fuel Economy & Use-phase Emissions	Sales-weighted average passenger fleet fuel economy, by region	Quantitative	Mpg, L/km, gCO_2/km, km/L	■ ■
		Number of (1) zero emission vehicles (ZEV), (2) hybrid vehicles and (3) plug-in hybrid vehicles sold	Quantitative	Number	■ ■
		Discussion of strategy for managing fleet fuel economy and emissions risks and opportunities	Discussion and Analysis	n/a	■
Cruise Lines	Greenhouse Gas Emissions	Gross global Scope 1 emissions	Quantitative	Metric tonnes (t) CO_2-e	■
		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	■
		(1) Total energy consumed, (2) percentage heavy fuel oil, (3) percentage onshore power supply (OPS) and (4) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■
		Average Energy Efficiency Design Index (EEDI) for new ships	Quantitative	Grammes of CO_2 per ton-nautical mile	■
Car Rental & Leasing	Fleet Fuel Economy & Utilisation	Rental day-weighted average rental fleet fuel economy, by region	Quantitative	Mpg, L/km, gCO_2/km, km/L	■
		Fleet utilisation rate	Quantitative	Rate	■
Marine Transportation	Greenhouse Gas Emissions	Gross global Scope 1 emissions	Quantitative	Metric tonnes (t) CO_2-e	■
		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	■
		(1) Total energy consumed, (2) percentage heavy fuel oil and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■
		Average Energy Efficiency Design Index (EEDI) for new ships	Quantitative	Grammes of CO_2 per ton-nautical mile	■
Rail Transportation	Greenhouse Gas Emissions	Gross global Scope 1 emissions	Quantitative	Metric tonnes (t) CO_2-e	■
		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	■
		Total fuel consumed, percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■

Physical Effects | Transition to a Low-Carbon, Resilient Economy | Regulatory Risk

TRANSPORTATION

INDUSTRY	DISCLOSURE TOPIC	METRIC	METRIC CATEGORY	METRIC UNIT OF MEASURE	
Road Transportation	Greenhouse Gas Emissions	Gross global Scope 1 emissions	Quantitative	Metric tonnes (t) CO_2-e	■
		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	■
		(1) Total fuel consumed, (2) percentage natural gas and (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	■

CONCLUSION

As the global investment community increasingly recognises that a company's ability to generate cash flows over the short, medium and long term is inextricably linked to its interactions with stakeholders, society, the economy and the natural environment, the movement to better understand and more effectively manage climate risk in investment portfolios continues to gain momentum. Sustainability factors are becoming mainstream to investment decision-making and how companies plan, manage and report.

Although climate risk is hardly new, global capital markets have had challenges addressing it effectively and efficiently, including a lack of comparability and confusion about the 'alphabet soup' of initiatives. The International Sustainability Standards Board (ISSB) of the IFRS Foundation was established in response to strong demand for high quality, globally comparable information on how sustainability-related risks and opportunities—including climate—affect a company's prospects.

In June 2023, the ISSB published its first two Standards, IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information* and IFRS S2 *Climate-related Disclosures*. The ISSB developed IFRS S1 and IFRS S2 with the benefit of extensive market feedback and international support from the G7, G20, International Organization of Securities Commissions (IOSCO), Financial Stability Board, African Finance Ministers and Finance Ministers and Central Bank Governors from more than 40 jurisdictions. The ISSB Standards consolidate and build upon the resources of the SASB, IIRC, CDSB and TCFD. They are assurable and enforceable, designed to elicit decision-useful information connected to financial statements.

The ISSB's delivery of IFRS S2 provides the capital markets with a truly global baseline of climate-related disclosures and a common language for disclosing the effects of climate-related risks and opportunities on a company's prospects.

The scope of IFRS S2 covers (a) climate-related risks to which a company is exposed, including climate-related physical risks and climate-related transition risks and (b) climate-related opportunities available to the company. To help companies identify and prepare disclosures on the climate-related risks and opportunities most likely to affect their prospects, the ISSB has provided Industry-based Guidance on Implementing IFRS S2, which addresses climate-related risks and opportunities associated with particular business models, activities or other common features that characterise participation in an industry. This Guidance is based on and aligned with the SASB Standards.

As the market's understanding of climate risk continues to evolve, companies, investors, regulators and policymakers will adapt, taking new approaches to understand and mitigate risks and capitalise on opportunities. While these developments unfold, the SASB Standards will evolve alongside them.

The ISSB has committed to maintain and enhance the SASB Standards and encourages preparers and investors to continue to use them.

With the increasingly sophisticated tools and information that have begun to emerge, addressing climate risk in capital markets can no longer be viewed as a zero-sum game. A healthy climate and a healthy global economy can and should be mutually supportive—not an exercise in maximising today's financial returns at the expense of tomorrow's. By pushing for more effective and efficient pricing of climate risks across the financial system, investors have the opportunity to create sustainable, long-term value for themselves and their portfolio companies, while building a more resilient economy for the world at large.

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