



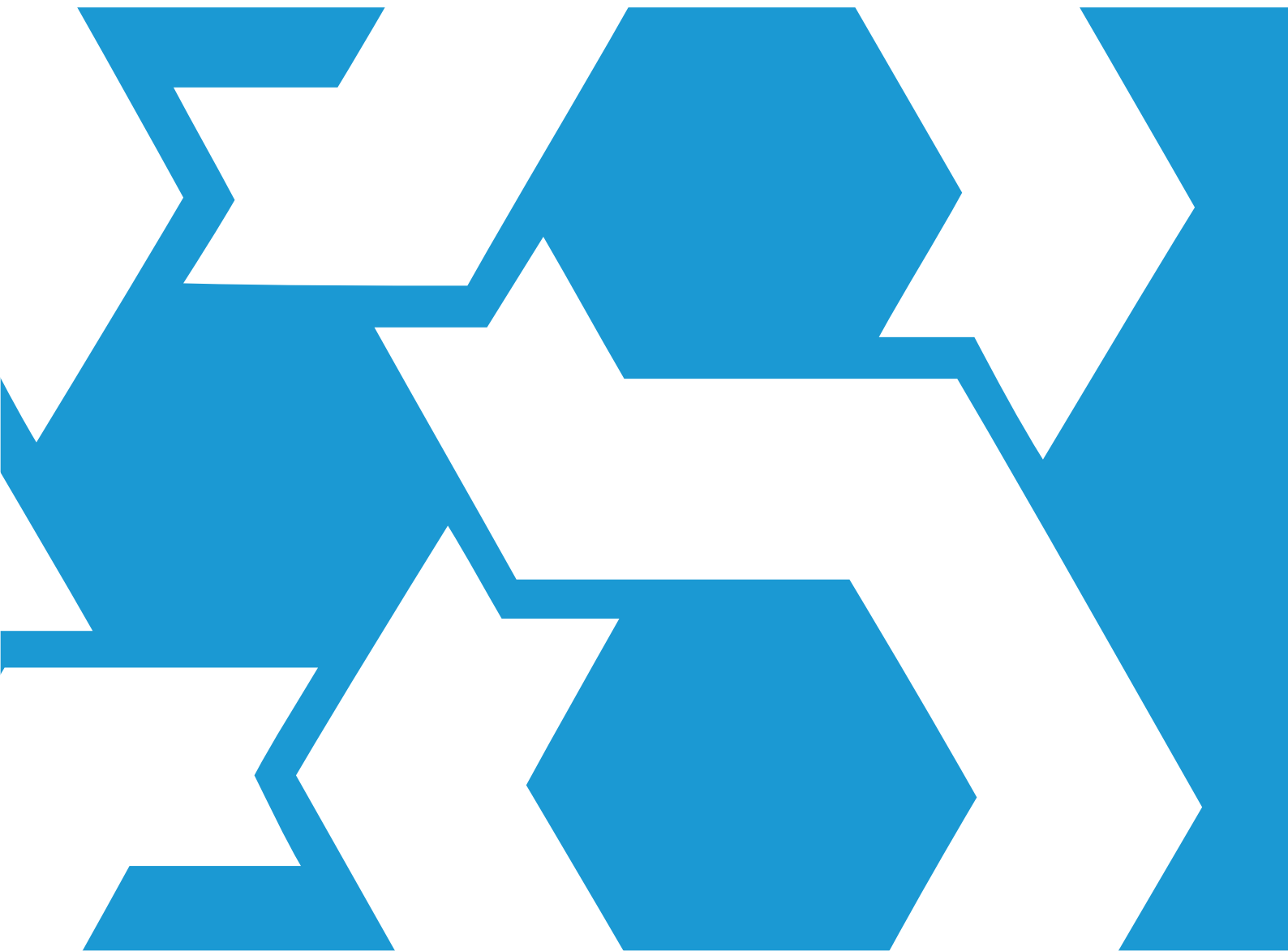
IFRS[®]
Sustainability

June 2023

IFRS S2

IFRS[®] Sustainability Disclosure Standard

Climate-related Disclosures



International Sustainability Standards Board

IFRS S2

Climate-related Disclosures

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IFRS SUSTAINABILITY DISCLOSURE STANDARDS

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IFRS S2 CLIMATE-RELATED DISCLOSURES—JUNE 2023

IFRS S2 *Climate-related Disclosures* is set out in paragraphs 1–37 and Appendices A–C. All paragraphs have equal authority. Paragraphs in **bold type** state the main principles. Terms defined in Appendix A are in *italics* the first time they appear in the Standard. Definitions of other terms are given in other IFRS Sustainability Disclosure Standards. The Standard should be read in the context of its objective, the Basis for Conclusions and IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information*.

IFRS S2 *Climate-related Disclosures*

Objective

- 1 The objective of IFRS S2 *Climate-related Disclosures* is to require an entity to disclose information about its *climate-related risks and opportunities* that is useful to *primary users of general purpose financial reports* in making decisions relating to providing resources to the entity.¹
- 2 This Standard requires an entity to disclose information about climate-related risks and opportunities that could reasonably be expected to affect the entity's cash flows, its access to finance or cost of capital over the short, medium or long term. For the purposes of this Standard, these risks and opportunities are collectively referred to as 'climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects'.

Scope

- 3 This Standard applies to:
 - (a) climate-related risks to which the entity is exposed, which are:
 - (i) *climate-related physical risks*; and
 - (ii) *climate-related transition risks*; and
 - (b) climate-related opportunities available to the entity.
- 4 Climate-related risks and opportunities that could not reasonably be expected to affect an entity's prospects are outside the scope of this Standard.

Core content

Governance

- 5 The objective of climate-related financial disclosures on governance is to enable users of general purpose financial reports to understand the governance processes, controls and procedures an entity uses to monitor, manage and oversee climate-related risks and opportunities.
- 6 To achieve this objective, an entity shall disclose information about:
 - (a) the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities. Specifically, the entity shall identify that body(s) or individual(s) and disclose information about:

¹ Throughout this Standard, the terms 'primary users' and 'users' are used interchangeably, with the same meaning.

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- (i) how responsibilities for climate-related risks and opportunities are reflected in the terms of reference, mandates, role descriptions and other related policies applicable to that body(s) or individual(s);
 - (ii) how the body(s) or individual(s) determines whether appropriate skills and competencies are available or will be developed to oversee strategies designed to respond to climate-related risks and opportunities;
 - (iii) how and how often the body(s) or individual(s) is informed about climate-related risks and opportunities;
 - (iv) how the body(s) or individual(s) takes into account climate-related risks and opportunities when overseeing the entity's strategy, its decisions on major transactions and its risk management processes and related policies, including whether the body(s) or individual(s) has considered trade-offs associated with those risks and opportunities; and
 - (v) how the body(s) or individual(s) oversees the setting of targets related to climate-related risks and opportunities, and monitors progress towards those targets (see paragraphs 33–36), including whether and how related performance metrics are included in remuneration policies (see paragraph 29(g)).
- (b) management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities, including information about:
 - (i) whether the role is delegated to a specific management-level position or management-level committee and how oversight is exercised over that position or committee; and
 - (ii) whether management uses controls and procedures to support the oversight of climate-related risks and opportunities and, if so, how these controls and procedures are integrated with other internal functions.

7 In preparing disclosures to fulfil the requirements in paragraph 6, an entity shall avoid unnecessary duplication in accordance with IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information* (IFRS S1) (see paragraph B42(b) of IFRS S1). For example, although an entity shall provide the information required by paragraph 6, if oversight of sustainability-related risks and opportunities is managed on an integrated basis, the entity would avoid duplication by providing integrated governance disclosures instead of separate disclosures for each sustainability-related risk and opportunity.

Strategy

- 8 The objective of climate-related financial disclosures on strategy is to enable users of *general purpose financial reports* to understand an entity's strategy for managing climate-related risks and opportunities.
- 9 Specifically, an entity shall disclose information to enable users of general purpose financial reports to understand:
- (a) the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects (see paragraphs 10–12);
 - (b) the current and anticipated effects of those climate-related risks and opportunities on the entity's *business model* and *value chain* (see paragraph 13);
 - (c) the effects of those climate-related risks and opportunities on the entity's strategy and decision-making, including information about its *climate-related transition plan* (see paragraph 14);
 - (d) the effects of those climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how those climate-related risks and opportunities have been factored into the entity's financial planning (see paragraphs 15–21); and
 - (e) the *climate resilience* of the entity's strategy and its business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities (see paragraph 22).

Climate-related risks and opportunities

- 10 An entity shall disclose information that enables users of general purpose financial reports to understand the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects. Specifically, the entity shall:
- (a) describe climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects;
 - (b) explain, for each climate-related risk the entity has identified, whether the entity considers the risk to be a climate-related physical risk or climate-related transition risk;
 - (c) specify, for each climate-related risk and opportunity the entity has identified, over which time horizons—short, medium or long term—the effects of each climate-related risk and opportunity could reasonably be expected to occur; and
 - (d) explain how the entity defines 'short term', 'medium term' and 'long term' and how these definitions are linked to the planning horizons used by the entity for strategic decision-making.

- 11 In identifying the climate-related risks and opportunities that could reasonably be expected to affect an entity's prospects, the entity shall use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort, including information about past events, current conditions and forecasts of future conditions.
- 12 In identifying the climate-related risks and opportunities that could reasonably be expected to affect an entity's prospects, the entity shall refer to and consider the applicability of the industry-based *disclosure topics* defined in the *Industry-based Guidance on Implementing IFRS S2*.

Business model and value chain

- 13 An entity shall disclose information that enables users of general purpose financial reports to understand the current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain. Specifically, the entity shall disclose:
- (a) a description of the current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain; and
 - (b) a description of where in the entity's business model and value chain climate-related risks and opportunities are concentrated (for example, geographical areas, facilities and types of assets).

Strategy and decision-making

- 14 An entity shall disclose information that enables users of general purpose financial reports to understand the effects of climate-related risks and opportunities on its strategy and decision-making. Specifically, the entity shall disclose:
- (a) information about how the entity has responded to, and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, including how the entity plans to achieve any climate-related targets it has set and any targets it is required to meet by law or regulation. Specifically, the entity shall disclose information about:
 - (i) current and anticipated changes to the entity's business model, including its resource allocation, to address climate-related risks and opportunities (for example, these changes could include plans to manage or decommission carbon-, energy- or water-intensive operations; resource allocations resulting from demand or supply-chain changes; resource allocations arising from business development through capital expenditure or additional expenditure on research and development; and acquisitions or divestments);

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- (ii) current and anticipated direct mitigation and adaptation efforts (for example, through changes in production processes or equipment, relocation of facilities, workforce adjustments, and changes in product specifications);
 - (iii) current and anticipated indirect mitigation and adaptation efforts (for example, through working with customers and supply chains);
 - (iv) any climate-related transition plan the entity has, including information about key assumptions used in developing its transition plan, and dependencies on which the entity's transition plan relies; and
 - (v) how the entity plans to achieve any climate-related targets, including any greenhouse gas emissions targets, described in accordance with paragraphs 33–36.
- (b) information about how the entity is resourcing, and plans to resource, the activities disclosed in accordance with paragraph 14(a).
- (c) quantitative and qualitative information about the progress of plans disclosed in previous reporting periods in accordance with paragraph 14(a).

Financial position, financial performance and cash flows

- 15 An entity shall disclose information that enables users of general purpose financial reports to understand:
- (a) the effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period (current financial effects); and
 - (b) the anticipated effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how climate-related risks and opportunities are included in the entity's financial planning (anticipated financial effects).
- 16 Specifically, an entity shall disclose quantitative and qualitative information about:
- (a) how climate-related risks and opportunities have affected its financial position, financial performance and cash flows for the reporting period;
 - (b) the climate-related risks and opportunities identified in paragraph 16(a) for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements;

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- (c) how the entity expects its financial position to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities, taking into consideration:
 - (i) its investment and disposal plans (for example, plans for capital expenditure, major acquisitions and divestments, joint ventures, business transformation, innovation, new business areas, and asset retirements), including plans the entity is not contractually committed to; and
 - (ii) its planned sources of funding to implement its strategy; and
 - (d) how the entity expects its financial performance and cash flows to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities (for example, increased revenue from products and services aligned with a lower-carbon economy; costs arising from physical damage to assets from climate events; and expenses associated with climate adaptation or mitigation).
- 17 In providing quantitative information, an entity may disclose a single amount or a range.
- 18 In preparing disclosures about the anticipated financial effects of a climate-related risk or opportunity, an entity shall:
- (a) use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort; and
 - (b) use an approach that is commensurate with the skills, capabilities and resources that are available to the entity for preparing those disclosures.
- 19 An entity need not provide quantitative information about the current or anticipated financial effects of a climate-related risk or opportunity if the entity determines that:
- (a) those effects are not separately identifiable; or
 - (b) the level of measurement uncertainty involved in estimating those effects is so high that the resulting quantitative information would not be useful.
- 20 In addition, an entity need not provide quantitative information about the anticipated financial effects of a climate-related risk or opportunity if the entity does not have the skills, capabilities or resources to provide that quantitative information.
- 21 If an entity determines that it need not provide quantitative information about the current or anticipated financial effects of a climate-related risk or opportunity applying the criteria set out in paragraphs 19–20, the entity shall:
- (a) explain why it has not provided quantitative information;

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- (b) provide qualitative information about those financial effects, including identifying line items, totals and subtotals within the related financial statements that are likely to be affected, or have been affected, by that climate-related risk or opportunity; and
- (c) provide quantitative information about the combined financial effects of that climate-related risk or opportunity with other climate-related risks or opportunities and other factors unless the entity determines that quantitative information about the combined financial effects would not be useful.

Climate resilience

22 An entity shall disclose information that enables users of general purpose financial reports to understand the resilience of the entity's strategy and business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities. The entity shall use climate-related scenario analysis to assess its climate resilience using an approach that is commensurate with the entity's circumstances (see paragraphs B1–B18). In providing quantitative information, the entity may disclose a single amount or a range. Specifically, the entity shall disclose:

- (a) the entity's assessment of its climate resilience as at the reporting date, which shall enable users of general purpose financial reports to understand:
 - (i) the implications, if any, of the entity's assessment for its strategy and business model, including how the entity would need to respond to the effects identified in the climate-related scenario analysis;
 - (ii) the significant areas of uncertainty considered in the entity's assessment of its climate resilience;
 - (iii) the entity's capacity to adjust or adapt its strategy and business model to climate change over the short, medium and long term, including:
 - (1) the availability of, and flexibility in, the entity's existing financial resources to respond to the effects identified in the climate-related scenario analysis, including to address climate-related risks and to take advantage of climate-related opportunities;
 - (2) the entity's ability to redeploy, repurpose, upgrade or decommission existing assets; and
 - (3) the effect of the entity's current and planned investments in climate-related mitigation, adaptation and opportunities for climate resilience; and
- (b) how and when the climate-related scenario analysis was carried out, including:

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- (i) information about the inputs the entity used, including:
 - (1) which climate-related scenarios the entity used for the analysis and the sources of those scenarios;
 - (2) whether the analysis included a diverse range of climate-related scenarios;
 - (3) whether the climate-related scenarios used for the analysis are associated with climate-related transition risks or climate-related physical risks;
 - (4) whether the entity used, among its scenarios, a climate-related scenario aligned with the *latest international agreement on climate change*;
 - (5) why the entity decided that its chosen climate-related scenarios are relevant to assessing its resilience to climate-related changes, developments or uncertainties;
 - (6) the time horizons the entity used in the analysis; and
 - (7) what scope of operations the entity used in the analysis (for example, the operating locations and business units used in the analysis);
- (ii) the key assumptions the entity made in the analysis, including assumptions about:
 - (1) climate-related policies in the jurisdictions in which the entity operates;
 - (2) macroeconomic trends;
 - (3) national- or regional-level variables (for example, local weather patterns, demographics, land use, infrastructure and availability of natural resources);
 - (4) energy usage and mix; and
 - (5) developments in technology; and
- (iii) the reporting period in which the climate-related scenario analysis was carried out (see paragraph B18).

23 In preparing disclosures to meet the requirements in paragraphs 13–22, an entity shall refer to and consider the applicability of cross-industry metric categories, as described in paragraph 29, and industry-based metrics associated with disclosure topics defined in the *Industry-based Guidance on Implementing IFRS S2* as described in paragraph 32.

Risk management

- 24 The objective of climate-related financial disclosures on risk management is to enable users of general purpose financial reports to understand an entity's processes to identify, assess, prioritise and monitor climate-related risks and opportunities, including whether and how those processes are integrated into and inform the entity's overall risk management process.
- 25 To achieve this objective, an entity shall disclose information about:
- (a) the processes and related policies the entity uses to identify, assess, prioritise and monitor climate-related risks, including information about:
 - (i) the inputs and parameters the entity uses (for example, information about data sources and the scope of operations covered in the processes);
 - (ii) whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related risks;
 - (iii) how the entity assesses the nature, likelihood and magnitude of the effects of those risks (for example, whether the entity considers qualitative factors, quantitative thresholds or other criteria);
 - (iv) whether and how the entity prioritises climate-related risks relative to other types of risk;
 - (v) how the entity monitors climate-related risks; and
 - (vi) whether and how the entity has changed the processes it uses compared with the previous reporting period;
 - (b) the processes the entity uses to identify, assess, prioritise and monitor climate-related opportunities, including information about whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related opportunities; and
 - (c) the extent to which, and how, the processes for identifying, assessing, prioritising and monitoring climate-related risks and opportunities are integrated into and inform the entity's overall risk management process.
- 26 In preparing disclosures to fulfil the requirements in paragraph 25, an entity shall avoid unnecessary duplication in accordance with IFRS S1 (see paragraph B42(b) of IFRS S1). For example, although an entity shall provide the information required by paragraph 25, if oversight of sustainability-related risks and opportunities is managed on an integrated basis, the entity would avoid duplication by providing integrated risk management disclosures instead of separate disclosures for each sustainability-related risk and opportunity.

Metrics and targets

- 27 The objective of climate-related financial disclosures on metrics and targets is to enable users of general purpose financial reports to understand an entity's performance in relation to its climate-related risks and opportunities, including progress towards any climate-related targets it has set, and any targets it is required to meet by law or regulation.
- 28 To achieve this objective, an entity shall disclose:
- (a) information relevant to the cross-industry metric categories (see paragraphs 29–31);
 - (b) industry-based metrics that are associated with particular business models, activities or other common features that characterise participation in an industry (see paragraph 32); and
 - (c) targets set by the entity, and any targets it is required to meet by law or regulation, to mitigate or adapt to climate-related risks or take advantage of climate-related opportunities, including metrics used by the governance body or management to measure progress towards these targets (see paragraphs 33–37).

Climate-related metrics

- 29 An entity shall disclose information relevant to the cross-industry metric categories of:
- (a) *greenhouse gases*—the entity shall:
 - (i) disclose its absolute gross greenhouse gas emissions generated during the reporting period, expressed as metric tonnes of CO₂ equivalent (see paragraphs B19–B22), classified as:
 - (1) *Scope 1 greenhouse gas emissions*;
 - (2) *Scope 2 greenhouse gas emissions*; and
 - (3) *Scope 3 greenhouse gas emissions*;
 - (ii) measure its greenhouse gas emissions in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) unless required by a jurisdictional authority or an exchange on which the entity is listed to use a different method for measuring its greenhouse gas emissions (see paragraphs B23–B25);
 - (iii) disclose the approach it uses to measure its greenhouse gas emissions (see paragraphs B26–B29) including:
 - (1) the measurement approach, inputs and assumptions the entity uses to measure its greenhouse gas emissions;
 - (2) the reason why the entity has chosen the measurement approach, inputs and assumptions it uses to measure its greenhouse gas emissions; and

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- (3) any changes the entity made to the measurement approach, inputs and assumptions during the reporting period and the reasons for those changes;
- (iv) for Scope 1 and Scope 2 greenhouse gas emissions disclosed in accordance with paragraph 29(a)(i)(1)–(2), disaggregate emissions between:
 - (1) the consolidated accounting group (for example, for an entity applying IFRS Accounting Standards, this group would comprise the parent and its consolidated subsidiaries); and
 - (2) other investees excluded from paragraph 29(a)(iv)(1) (for example, for an entity applying IFRS Accounting Standards, these investees would include associates, joint ventures and unconsolidated subsidiaries);
- (v) for Scope 2 greenhouse gas emissions disclosed in accordance with paragraph 29(a)(i)(2), disclose its location-based Scope 2 greenhouse gas emissions, and provide information about any contractual instruments that is necessary to inform users' understanding of the entity's Scope 2 greenhouse gas emissions (see paragraphs B30–B31); and
- (vi) for Scope 3 greenhouse gas emissions disclosed in accordance with paragraph 29(a)(i)(3), and with reference to paragraphs B32–B57, disclose:
 - (1) the categories included within the entity's measure of Scope 3 greenhouse gas emissions, in accordance with the *Scope 3 categories* described in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011); and
 - (2) additional information about the entity's Category 15 greenhouse gas emissions or those associated with its investments (*financed emissions*), if the entity's activities include asset management, commercial banking or insurance (see paragraphs B58–B63);
- (b) climate-related transition risks—the amount and percentage of assets or business activities vulnerable to climate-related transition risks;
- (c) climate-related physical risks—the amount and percentage of assets or business activities vulnerable to climate-related physical risks;
- (d) climate-related opportunities—the amount and percentage of assets or business activities aligned with climate-related opportunities;
- (e) capital deployment—the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities;
- (f) *internal carbon prices*—the entity shall disclose:

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- (i) an explanation of whether and how the entity is applying a carbon price in decision-making (for example, investment decisions, transfer pricing and scenario analysis); and
 - (ii) the price for each metric tonne of greenhouse gas emissions the entity uses to assess the costs of its greenhouse gas emissions;
 - (g) remuneration—the entity shall disclose:
 - (i) a description of whether and how climate-related considerations are factored into executive remuneration (see also paragraph 6(a)(v)); and
 - (ii) the percentage of executive management remuneration recognised in the current period that is linked to climate-related considerations.
- 30 In preparing disclosures to meet the requirements in paragraph 29(b)–(d), an entity shall use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort.
- 31 In preparing disclosures to meet the requirements in paragraph 29(b)–(g), an entity shall refer to paragraphs B64–B65.
- 32 An entity shall disclose industry-based metrics that are associated with one or more particular business models, activities or other common features that characterise participation in an industry. In determining the industry-based metrics that the entity discloses, the entity shall refer to and consider the applicability of the industry-based metrics associated with disclosure topics described in the *Industry-based Guidance on Implementing IFRS S2*.

Climate-related targets

- 33 An entity shall disclose the quantitative and qualitative climate-related targets it has set to monitor progress towards achieving its strategic goals, and any targets it is required to meet by law or regulation, including any greenhouse gas emissions targets. For each target, the entity shall disclose:
- (a) the metric used to set the target (see paragraphs B66–B67);
 - (b) the objective of the target (for example, mitigation, adaptation or conformance with science-based initiatives);
 - (c) the part of the entity to which the target applies (for example, whether the target applies to the entity in its entirety or only a part of the entity, such as a specific business unit or specific geographical region);
 - (d) the period over which the target applies;
 - (e) the base period from which progress is measured;
 - (f) any milestones and interim targets;
 - (g) if the target is quantitative, whether it is an absolute target or an intensity target; and

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- (h) how the latest international agreement on climate change, including jurisdictional commitments that arise from that agreement, has informed the target.
- 34 An entity shall disclose information about its approach to setting and reviewing each target, and how it monitors progress against each target, including:
- (a) whether the target and the methodology for setting the target has been validated by a third party;
 - (b) the entity's processes for reviewing the target;
 - (c) the metrics used to monitor progress towards reaching the target; and
 - (d) any revisions to the target and an explanation for those revisions.
- 35 An entity shall disclose information about its performance against each climate-related target and an analysis of trends or changes in the entity's performance.
- 36 For each greenhouse gas emissions target disclosed in accordance with paragraphs 33–35, an entity shall disclose:
- (a) which greenhouse gases are covered by the target.
 - (b) whether Scope 1, Scope 2 or Scope 3 greenhouse gas emissions are covered by the target.
 - (c) whether the target is a gross greenhouse gas emissions target or net greenhouse gas emissions target. If the entity discloses a net greenhouse gas emissions target, the entity is also required to separately disclose its associated gross greenhouse gas emissions target (see paragraphs B68–B69).
 - (d) whether the target was derived using a sectoral decarbonisation approach.
 - (e) the entity's planned use of *carbon credits* to offset greenhouse gas emissions to achieve any net greenhouse gas emissions target. In explaining its planned use of carbon credits the entity shall disclose information including, and with reference to paragraphs B70–B71:
 - (i) the extent to which, and how, achieving any net greenhouse gas emissions target relies on the use of carbon credits;
 - (ii) which third-party scheme(s) will verify or certify the carbon credits;
 - (iii) the type of carbon credit, including whether the underlying offset will be nature-based or based on technological carbon removals, and whether the underlying offset is achieved through carbon reduction or removal; and

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- (iv) any other factors necessary for users of general purpose financial reports to understand the credibility and integrity of the carbon credits the entity plans to use (for example, assumptions regarding the permanence of the carbon offset).

37 In identifying and disclosing the metrics used to set and monitor progress towards reaching a target described in paragraphs 33–34, an entity shall refer to and consider the applicability of cross-industry metrics (see paragraph 29) and industry-based metrics (see paragraph 32), including those described in an applicable IFRS Sustainability Disclosure Standard, or metrics that otherwise satisfy the requirements in IFRS S1.

Appendix A

Defined terms

This appendix is an integral part of IFRS S2 and has the same authority as the other parts of the Standard.

carbon credit	An emissions unit that is issued by a carbon crediting programme and represents an emission reduction or removal of greenhouse gases . Carbon credits are uniquely serialised, issued, tracked and cancelled by means of an electronic registry.
climate resilience	The capacity of an entity to adjust to climate-related changes, developments or uncertainties. Climate resilience involves the capacity to manage climate-related risks and benefit from climate-related opportunities , including the ability to respond and adapt to climate-related transition risks and climate-related physical risks . An entity's climate resilience includes both its strategic resilience and its operational resilience to climate-related changes, developments and uncertainties.
climate-related physical risks	Risks resulting from climate change that can be event-driven (acute physical risk) or from longer-term shifts in climatic patterns (chronic physical risk). Acute physical risks arise from weather-related events such as storms, floods, drought or heatwaves, which are increasing in severity and frequency. Chronic physical risks arise from longer-term shifts in climatic patterns including changes in precipitation and temperature which could lead to sea level rise, reduced water availability, biodiversity loss and changes in soil productivity. These risks could carry financial implications for an entity, such as costs resulting from direct damage to assets or indirect effects of supply-chain disruption. The entity's financial performance could also be affected by changes in water availability, sourcing and quality; and extreme temperature changes affecting the entity's premises, operations, supply chains, transportation needs and employee health and safety.
climate-related risks and opportunities	Climate-related risks refers to the potential negative effects of climate change on an entity. These risks are categorised as climate-related physical risks and climate-related transition risks. Climate-related opportunities refers to the potential positive effects arising from climate change for an entity. Efforts to mitigate and adapt to climate change can produce climate-related opportunities for an entity.
climate-related transition plan	An aspect of an entity's overall strategy that lays out the entity's targets, actions or resources for its transition towards a lower-carbon economy, including actions such as reducing its greenhouse gas emissions.

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climate-related transition risks	Risks that arise from efforts to transition to a lower-carbon economy. Transition risks include policy, legal, technological, market and reputational risks. These risks could carry financial implications for an entity, such as increased operating costs or asset impairment due to new or amended climate-related regulations. The entity's financial performance could also be affected by shifting consumer demands and the development and deployment of new technology.
CO₂ equivalent	The universal unit of measurement to indicate the <i>global warming potential</i> of each greenhouse gas , expressed in terms of the global warming potential of one unit of carbon dioxide. This unit is used to evaluate releasing (or avoiding releasing) different greenhouse gases against a common basis.
financed emissions	The portion of gross greenhouse gas emissions of an investee or counterparty attributed to the loans and investments made by an entity to the investee or counterparty. These emissions are part of Scope 3 Category 15 (investments) as defined in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011).
global warming potential	A factor describing the radiative forcing impact (degree of harm to the atmosphere) of one unit of a given greenhouse gas relative to one unit of CO ₂ .
greenhouse gases	The seven greenhouse gases listed in the Kyoto Protocol—carbon dioxide (CO ₂); methane (CH ₄); nitrous oxide (N ₂ O); hydrofluorocarbons (HFCs); nitrogen trifluoride (NF ₃); perfluorocarbons (PFCs) and sulphur hexafluoride (SF ₆).
indirect greenhouse gas emissions	Emissions that are a consequence of the activities of an entity, but occur at sources owned or controlled by another entity.
internal carbon price	Price used by an entity to assess the financial implications of changes to investment, production and consumption patterns, and of potential technological progress and future emissions-abatement costs. An entity can use internal carbon prices for a range of business applications. Two types of internal carbon prices that an entity commonly uses are: (a) a shadow price, which is a theoretical cost or notional amount that the entity does not charge but that can be used to understand the economic implications or trade-offs for such things as risk impacts, new investments, the net present value of projects, and the cost and benefit of various initiatives; and

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	(b) an internal tax or fee, which is a carbon price charged to a business activity, product line, or other business unit based on its greenhouse gas emissions (these internal taxes or fees are similar to intracompany transfer pricing).
latest international agreement on climate change	An agreement by states, as members of the United Nations Framework Convention on Climate Change, to combat climate change. The agreements set norms and targets for a reduction in greenhouse gases .
Scope 1 greenhouse gas emissions	Direct greenhouse gas emissions that occur from sources that are owned or controlled by an entity.
Scope 2 greenhouse gas emissions	<i>Indirect greenhouse gas emissions</i> from the generation of purchased or acquired electricity, steam, heating or cooling consumed by an entity. Purchased and acquired electricity is electricity that is purchased or otherwise brought into an entity's boundary. Scope 2 greenhouse gas emissions physically occur at the facility where electricity is generated.
Scope 3 greenhouse gas emissions	Indirect greenhouse gas emissions (not included in Scope 2 greenhouse gas emissions) that occur in the value chain of an entity, including both upstream and downstream emissions. Scope 3 greenhouse gas emissions include the Scope 3 categories in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011).
Scope 3 categories	Scope 3 greenhouse gas emissions are categorised into these 15 categories—as described in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011): (1) purchased goods and services; (2) capital goods; (3) fuel- and energy-related activities not included in Scope 1 greenhouse gas emissions or Scope 2 greenhouse gas emissions; (4) upstream transportation and distribution; (5) waste generated in operations; (6) business travel; (7) employee commuting; (8) upstream leased assets; (9) downstream transportation and distribution; (10) processing of sold products;

- (11) use of sold products;
- (12) end-of-life treatment of sold products;
- (13) downstream leased assets;
- (14) franchises; and
- (15) investments.

Terms defined in other Standards and used in this Standard with the same meaning

business model	An entity's system of transforming inputs through its activities into outputs and outcomes that aims to fulfil the entity's strategic purposes and create value for the entity and hence generate cash flows over the short, medium and long term.
disclosure topic	A specific sustainability-related risk or opportunity based on the activities conducted by entities within a particular industry as set out in an IFRS Sustainability Disclosure Standard or a SASB Standard.
general purpose financial reports	Reports that provide financial information about a reporting entity that is useful to primary users in making decisions relating to providing resources to the entity. Those decisions involve decisions about: (a) buying, selling or holding equity and debt instruments; (b) providing or selling loans and other forms of credit; or (c) exercising rights to vote on, or otherwise influence, the entity's management's actions that affect the use of the entity's economic resources. General purpose financial reports include—but are not restricted to—an entity's general purpose financial statements and sustainability-related financial disclosures.
impracticable	Applying a requirement is impracticable when an entity cannot apply it after making every reasonable effort to do so.
primary users of general purpose financial reports (primary users)	Existing and potential investors, lenders and other creditors.
value chain	The full range of interactions, resources and relationships related to a reporting entity's business model and the external environment in which it operates. A value chain encompasses the interactions, resources and relationships an entity uses and depends on to create its products or services from conception to delivery, consumption and end-of-life, including interactions, resources and

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relationships in the entity's operations, such as human resources; those along its supply, marketing and distribution channels, such as materials and service sourcing, and product and service sale and delivery; and the financing, geographical, geopolitical and regulatory environments in which the entity operates.

Appendix B

Application guidance

This appendix is an integral part of IFRS S2 and has the same authority as the other parts of the Standard.

Climate resilience (paragraph 22)

- B1 Paragraph 22 requires an entity to use climate-related scenario analysis to assess its climate resilience, using an approach that is commensurate with its circumstances.² The entity is required to use an approach to climate-related scenario analysis that enables it to consider all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort. Paragraphs B2–B18 provide guidance on how an entity uses scenario analysis to assess the entity’s climate resilience. Specifically:
- (a) paragraphs B2–B7 set out the factors the entity shall consider when assessing its circumstances;
 - (b) paragraphs B8–B15 set out the factors the entity shall consider when determining an appropriate approach to climate-related scenario analysis; and
 - (c) paragraphs B16–B18 set out additional factors for the entity to consider when determining its approach to climate-related scenario analysis over time.

Assessing the circumstances

- B2 An entity shall use an approach to climate-related scenario analysis that is commensurate with its circumstances as at the time the entity carries out its climate-related scenario analysis (see paragraph B3). To assess its circumstances the entity shall consider:
- (a) the entity’s exposure to climate-related risks and opportunities (see paragraphs B4–B5); and
 - (b) the skills, capabilities and resources available to the entity for the climate-related scenario analysis (see paragraphs B6–B7).
- B3 An entity shall assess its circumstances each time it carries out its climate-related scenario analysis. For example, an entity that carries out its climate-related scenario analysis every three years to align with its strategic planning cycle (see paragraph B18) would be required to reconsider for this purpose its exposure to climate-related risks and opportunities and the skills, capabilities and resources available at that time.

² This application guidance (paragraphs B1–B18) draws on the range of practice outlined in documents published by the Task Force on Climate-related Financial Disclosures (TCFD), including *Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities* (2017) and *Guidance on Scenario Analysis for Non-Financial Companies* (2020).

Exposure to climate-related risks and opportunities

- B4 An entity shall consider its exposure to climate-related risks and opportunities in its assessment of its circumstances and when determining the approach to use for its climate-related scenario analysis. This consideration provides essential context for understanding the potential benefits of using a particular approach to climate-related scenario analysis. For example, if an entity has a high degree of exposure to climate-related risk then a more quantitative or technically sophisticated approach to climate-related scenario analysis would be of greater benefit to the entity and users of general purpose financial reports. Users of general purpose financial reports would be less likely to benefit from quantitative or technically sophisticated climate-related scenario analysis if the entity is exposed to few or relatively less severe climate-related risks and opportunities. This means that—with all else being equal—the greater the entity's exposure to climate-related risks or opportunities, the more likely it is the entity would determine that a more technically sophisticated form of climate-related scenario analysis is required.
- B5 This Standard requires an entity to identify the climate-related risks and opportunities to which it is exposed (see paragraph 10) and to disclose information about the process the entity uses to identify, assess, prioritise and monitor those risks and opportunities (see paragraph 25). The information the entity discloses in accordance with paragraphs 10 and 25 can inform the entity's consideration of its exposure to climate-related risks and opportunities.

Skills, capabilities and resources available

- B6 An entity shall consider the available skills, capabilities and resources when determining an appropriate approach to use for its climate-related scenario analysis. These skills, capabilities and resources might include both internal and external skills, capabilities and resources. The entity's available skills, capabilities and resources provide context to inform its consideration of the potential cost and level of effort required by a particular approach to climate-related scenario analysis. For example, if an entity has only just begun to explore the use of climate-related scenario analysis to assess its climate resilience, it might be unable to use a quantitative or technically sophisticated approach to climate-related scenario analysis without undue cost or effort. For the avoidance of doubt, if resources are available to the entity then it will be able to invest in obtaining or developing the necessary skills and capabilities.
- B7 Climate-related scenario analysis can be resource intensive and might—through an iterative learning process—be developed and refined over multiple planning cycles. As an entity repeats the climate-related scenario analysis, it is likely to develop skills and capabilities that will enable the entity to strengthen its approach to climate-related scenario analysis over time. For example, if an entity has not yet used climate-related scenario analysis or participates in an industry where climate-related scenario analysis is not commonly used, the entity might need more time to develop its skills and capabilities. In contrast, an entity in an industry where climate-related scenario analysis is established practice—such as extractives and mineral

processing—would be expected to have strengthened its skills and capabilities through its experience.

Determining the appropriate approach

- B8 An entity shall determine an approach to climate-related scenario analysis that enables it to consider all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort. The determination of the approach shall be informed by the assessments of the entity's exposure to climate-related risks and opportunities (see paragraphs B4–B5) and its available skills, capabilities and resources (see paragraphs B6–B7). Making such a determination involves:
- (a) selecting inputs to the climate-related scenario analysis (see paragraphs B11–B13); and
 - (b) making analytical choices about how to carry out the climate-related scenario analysis (see paragraphs B14–B15).
- B9 Reasonable and supportable information includes information about past events, current conditions and forecasts of future conditions. It also includes quantitative or qualitative information, and information that is obtained from an external source or owned or developed internally.
- B10 An entity will need to use judgement to determine the mix of inputs and analytical choices that will enable the entity to consider all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort. The degree of judgement that is required depends on the availability of detailed information. As the time horizon increases and the availability of detailed information decreases, the degree of judgement required increases.

Selecting inputs

- B11 When an entity selects the inputs to use in its climate-related scenario analysis, the entity shall consider all reasonable and supportable information—including scenarios, variables and other inputs—available to the entity at the reporting date without undue cost or effort. The inputs used in scenario analysis might include information that is qualitative or quantitative, and is obtained from an external source or developed internally. For example, publicly available climate-related scenarios—from authoritative sources—that describe future trends and a range of pathways to plausible outcomes are considered to be available to the entity without undue cost or effort.
- B12 When selecting scenarios, variables and other inputs to use in climate-related scenario analysis, an entity might, for example, use one or more climate-related scenarios—including international and regional scenarios—that are publicly and freely available from authoritative sources. The entity shall have a reasonable and supportable basis for using a particular scenario or set of scenarios. For example, an entity with operations concentrated in a jurisdiction where emissions are regulated—or are likely to be regulated in the future—might determine that it is appropriate to carry out its analysis using a scenario consistent with an orderly transition to a lower-carbon

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economy or consistent with relevant jurisdictional commitments to the latest international agreement on climate change. Elsewhere, for example, an entity with heightened exposure to physical climate-related risks might determine that it is appropriate to carry out its analysis using a localised climate-related scenario that takes into account current policies.

- B13 In considering whether the selected inputs are reasonable and supportable, an entity shall consider the objective of paragraph 22, which requires the entity to disclose information that enables users of general purpose financial reports to understand the resilience of the entity's strategy and business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities. This means that the inputs to the entity's climate-related scenario analysis shall be relevant to the entity's circumstances, for example, to the particular activities the entity undertakes and the geographical location of those activities.

Making analytical choices

- B14 An entity's resilience assessment will be informed not only by the individual inputs to its climate-related scenario analysis, but also by the information it develops in combining those inputs to carry out the analysis. The entity shall prioritise the analytical choices (for example, whether to use qualitative analysis or quantitative modelling) that will enable it to consider all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort. For example, if an entity is able—without undue cost or effort—to incorporate multiple carbon price pathways associated with a given outcome (for example, a 1.5 degree Celsius outcome), this analysis is likely to strengthen the entity's resilience assessment, assuming such an approach is warranted by the entity's risk exposure.
- B15 Quantitative information will often enable an entity to carry out a more robust assessment of its climate resilience. However, qualitative information (including scenario narratives), either alone or combined with quantitative data, can also provide a reasonable and supportable basis for the entity's resilience assessment.

Additional considerations

- B16 Climate-related scenario analysis is an evolving practice and, therefore, the approach that an entity uses is likely to change over time. As described in paragraphs B2–B7, the entity shall determine its approach to climate-related scenario analysis based on its particular circumstances, including the entity's exposure to climate-related risks and opportunities and the skills, capabilities and resources available for the scenario analysis. Those circumstances are also likely to change over time. Therefore, the entity's approach to climate-related scenario analysis need not be the same from one reporting period or strategic planning cycle to the next (see paragraph B18).

- B17 An entity might use a simpler approach to climate-related scenario analysis, such as qualitative scenario narratives, if such an approach is appropriate to the entity's circumstances. For example, if an entity does not currently have the skills, capabilities or resources to carry out quantitative climate-related scenario analysis but has a high degree of exposure to climate-related risk, the entity might initially use a simpler approach to climate-related scenario analysis, but would build its capabilities through experience and, therefore, would apply a more advanced quantitative approach to climate-related scenario analysis over time. An entity with a high degree of exposure to climate-related risks and opportunities, and with access to the necessary skills, capabilities or resources, is required to apply a more advanced quantitative approach to climate-related scenario analysis.
- B18 Although paragraph 22 requires an entity to disclose information about its climate resilience at each reporting date, the entity might carry out its climate-related scenario analysis in line with its strategic planning cycle, including a multi-year strategic planning cycle (for example, every three to five years). Therefore, in some reporting periods the entity's disclosures in accordance with paragraph 22(b) could remain unchanged from the previous reporting period if the entity does not conduct a scenario analysis annually. The entity shall—at a minimum—update its climate-related scenario analysis in line with its strategic planning cycle. However, an assessment of the entity's resilience is required to be carried out annually to reflect updated insight into the implications of climate uncertainty for the entity's business model and strategy. As such, an entity's disclosure in accordance with paragraph 22(a)—that is, the results of the entity's resilience assessment—shall be updated at each reporting period.

Greenhouse gases (paragraph 29(a))

Greenhouse gas emissions**Permission to use information from a reporting period that is different from the entity's reporting period, in specific circumstances**

- B19 An entity might have a different reporting period from some or all of the entities in its value chain. Such a difference would mean that greenhouse gas emissions information from these entities in its value chain for the entity's reporting period might not be readily available for the entity to use for its own disclosure. In such circumstances, the entity is permitted to measure its greenhouse gas emissions in accordance with paragraph 29(a)(i) using information for reporting periods that are different from its own reporting period if that information is obtained from entities in its value chain with reporting periods that are different from the entity's reporting period, on the condition that:
- (a) the entity uses the most recent data available from those entities in its value chain without undue cost or effort to measure and disclose its greenhouse gas emissions;
 - (b) the length of the reporting periods is the same; and
 - (c) the entity discloses the effects of significant events and changes in circumstances (relevant to its greenhouse gas emissions) that occur between the reporting dates of the entities in its value chain and the date of the entity's general purpose financial reports.

Aggregation of greenhouse gases into CO₂ equivalent using global warming potential values

- B20 Paragraph 29(a) requires an entity to disclose its absolute gross greenhouse gas emissions generated during the reporting period, expressed as metric tonnes of CO₂ equivalent. To meet this requirement, the entity shall aggregate the seven constituent greenhouse gases into CO₂ equivalent values.
- B21 If an entity uses direct measurement to measure its greenhouse gas emissions, the entity is required to convert the seven constituent greenhouse gases into a CO₂ equivalent value using global warming potential values based on a 100-year time horizon, from the latest Intergovernmental Panel on Climate Change assessment available at the reporting date.
- B22 If an entity uses emission factors to estimate its greenhouse gas emissions, the entity shall use—as its basis for measuring its greenhouse gas emissions—the emission factors that best represent the entity's activity (see paragraph B29). If these emission factors have already converted the constituent gases into CO₂ equivalent values, the entity is not required to recalculate the emission factors using global warming potential values based on a 100-year time horizon from the latest Intergovernmental Panel on Climate Change assessment available at the reporting date. However, if an entity uses emission factors that are not

converted into CO₂ equivalent values, then the entity shall use the global warming potential values based on a 100-year time horizon from the latest Intergovernmental Panel on Climate Change assessment available at the reporting date.

Greenhouse Gas Protocol

- B23 Paragraph 29(a)(ii) requires an entity to disclose its greenhouse gas emissions measured in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004). For the avoidance of doubt, an entity shall apply the requirements in the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) only to the extent that they do not conflict with the requirements in this Standard. For example, the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) does not require an entity to disclose its Scope 3 greenhouse gas emissions, however, the entity is required to disclose Scope 3 greenhouse gas emissions in accordance with paragraph 29(a).
- B24 An entity is required to use the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) unless the entity is required by a jurisdictional authority or an exchange on which it is listed to use a different method for measuring its greenhouse gas emissions. If the entity is required by a jurisdictional authority or an exchange on which it is listed to use a different method for measuring its greenhouse gas emissions, the entity is permitted to use this method rather than using the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) for as long as the jurisdictional or exchange requirement applies to the entity.
- B25 In some circumstances, an entity might be subject to a requirement in the jurisdiction in which it operates to disclose its greenhouse gas emissions for a specific part of the entity or for some of its greenhouse gas emissions (for example, only for Scope 1 and Scope 2 greenhouse gas emissions). In such circumstances, the jurisdictional requirement does not exempt the entity from applying the requirements in this Standard to disclose the entity's Scope 1, Scope 2 and Scope 3 greenhouse gas emissions for the entity as a whole.

Measurement approach, inputs and assumptions

- B26 Paragraph 29(a)(iii) requires an entity to disclose the measurement approach, inputs and assumptions it uses to measure its greenhouse gas emissions. As part of this requirement, the entity shall include information about:
- (a) the measurement approach the entity uses in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) (see paragraph B27);
 - (b) the applicable method if the entity is not using the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) and the measurement approach the entity uses (see paragraph B28); and
 - (c) the emission factors the entity uses (see paragraph B29).

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The measurement approach set out in the Greenhouse Gas Protocol

- B27 The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) includes different measurement approaches that an entity might use when measuring its greenhouse gas emissions. In disclosing information in accordance with paragraph 29(a)(iii), the entity is required to disclose information about the measurement approach it uses. For example, when the entity discloses its greenhouse gas emissions measured in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004), the entity is required to use the equity share or control approach. Specifically, the entity shall disclose:
- (a) the approach it uses to determine its greenhouse gas emissions (for example, the equity share or control approach in the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004)); and
 - (b) the reason, or reasons, for the entity's choice of measurement approach and how that approach relates to the disclosure objective in paragraph 27.

Other methods and measurement approaches

- B28 When an entity discloses its greenhouse gas emissions measured in accordance with another method, applying paragraphs 29(a)(ii), B24–B25 or C4(a), the entity shall disclose:
- (a) the applicable method and measurement approach the entity uses to determine its greenhouse gas emissions; and
 - (b) the reason, or reasons, for the entity's choice of method and measurement approach and how that approach relates to the disclosure objective in paragraph 27.

Emission factors

- B29 As part of an entity's disclosure of the measurement approach, inputs and assumptions, the entity shall disclose information to enable users of general purpose financial reports to understand which emission factors the entity uses in its measurement of its greenhouse gas emissions. This Standard does not specify emission factors an entity is required to use in its measurement of its greenhouse gas emissions. Instead, this Standard requires an entity to use emission factors that best represent the entity's activity as its basis for measuring its greenhouse gas emissions.

Scope 2 greenhouse gas emissions

- B30 Paragraph 29(a)(v) requires an entity to disclose its location-based Scope 2 greenhouse gas emissions and provide information about any contractual instruments the entity has entered into that could inform users' understanding of the entity's Scope 2 greenhouse gas emissions. For the avoidance of doubt, an entity is required to disclose its Scope 2 greenhouse gas emissions using a location-based approach and is required to provide information about contractual instruments only if such instruments exist and

information about them informs users' understanding of an entity's Scope 2 greenhouse gas emissions.

- B31 Contractual instruments are any type of contract between an entity and another party for the sale and purchase of energy bundled with attributes about the energy generation or for unbundled energy attribute claims (unbundled energy attribute claims relate to the sale and purchase of energy that is separate and distinct from the greenhouse gas attribute contractual instruments). Various types of contractual instruments are available in different markets and the entity might disclose information about its market-based Scope 2 greenhouse gas emissions as part of its disclosure.

Scope 3 greenhouse gas emissions

- B32 In accordance with paragraph 29(a)(vi), an entity shall disclose information about its Scope 3 greenhouse gas emissions to enable users of general purpose financial reports to understand the source of these emissions. The entity shall consider its entire value chain (upstream and downstream) and shall consider all 15 categories of Scope 3 greenhouse gas emissions, as described in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011). In accordance with paragraph 29(a)(vi), the entity shall disclose which of these categories are included in its Scope 3 greenhouse gas emissions disclosures.
- B33 For the avoidance of doubt, regardless of the method an entity uses to measure its greenhouse gas emissions, the entity is required to disclose the categories included within its measure of Scope 3 greenhouse gas emissions as described in paragraph 29(a)(vi)(1).
- B34 In accordance with paragraph B11 in IFRS S1, on the occurrence of a significant event or a significant change in circumstances, an entity shall reassess the scope of all affected climate-related risks and opportunities throughout its value chain, including reassessing which Scope 3 categories and entities throughout its value chain to include in the measurement of its Scope 3 greenhouse gas emissions. A significant event or significant change in circumstances can occur without the entity being involved in that event or change in circumstances or as a result of a change in what the entity assesses to be important to users of general purpose financial reports. For example, such significant events or significant changes in circumstances might include:
- (a) a significant change in the entity's value chain (for example, a supplier in the entity's value chain makes a change that significantly alters the supplier's greenhouse gas emissions);
 - (b) a significant change in the entity's business model, activities or corporate structure (for example, a merger or acquisition that expands the entity's value chain); and
 - (c) a significant change in the entity's exposure to climate-related risks and opportunities (for example, a supplier in the entity's value chain is affected by the introduction of an emissions regulation that the entity had not anticipated).

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- B35 An entity is permitted, but not required, to reassess the scope of any climate-related risk or opportunity throughout its value chain more frequently than required by paragraph B11 in IFRS S1.
- B36 In accordance with paragraph B6(b) in IFRS S1, to determine the scope of the value chain, which includes its breadth and composition, an entity shall use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort.
- B37 An entity that participates in one or more financial activities associated with asset management, commercial banking and insurance shall disclose additional information about the financed emissions associated with those activities as part of the entity's disclosure of its Scope 3 greenhouse gas emissions (see paragraphs B58–B63).

Scope 3 measurement framework

- B38 An entity's measurement of Scope 3 greenhouse gas emissions is likely to include the use of estimation rather than solely comprising direct measurement. In measuring Scope 3 greenhouse gas emissions an entity shall use a measurement approach, inputs and assumptions that result in a faithful representation of this measurement. The measurement framework described in paragraphs B40–B54 provides guidance for an entity to use in preparing its Scope 3 greenhouse gas emissions disclosures.
- B39 An entity is required to use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort when the entity selects the measurement approach, inputs and assumptions it uses in measuring Scope 3 greenhouse gas emissions.
- B40 An entity's measurement of Scope 3 greenhouse gas emissions relies upon a range of inputs. This Standard does not specify the inputs the entity is required to use to measure its Scope 3 greenhouse gas emissions, but does require the entity to prioritise inputs and assumptions using these identifying characteristics (which are listed in no particular order):
- (a) data based on direct measurement (paragraphs B43–B45);
 - (b) data from specific activities within the entity's value chain (paragraphs B46–B49);
 - (c) timely data that faithfully represents the jurisdiction of, and the technology used for, the value chain activity and its greenhouse gas emissions (paragraphs B50–B52); and
 - (d) data that has been verified (paragraphs B53–B54).
- B41 An entity is required to apply the Scope 3 measurement framework to prioritise inputs and assumptions even when the entity is required by a jurisdictional authority or an exchange on which the entity is listed to use a method other than the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) for measuring its greenhouse gas emissions (see paragraphs B24–B25), or whether the entity uses the transition relief described in paragraph C4(a).

B42 An entity's prioritisation of the measurement approach, inputs and assumptions and the entity's considerations of associated trade-offs—based on the characteristics in paragraph B40—requires management to apply judgement. For example, an entity might need to consider the trade-offs between timely data and data that is more representative of the jurisdiction and technology used for the value chain activity and its emissions. More recent data might provide less detail about the specific activity, including the technology that was used in the value chain and the location of that activity. On the other hand, older data that is published infrequently might be considered more representative of the specific activity and its greenhouse gas emissions.

Data based on direct measurement

B43 Two methods are used to quantify Scope 3 greenhouse gas emissions: direct measurement and estimation. Of these two methods—and with all else being equal—an entity shall prioritise direct measurement.

B44 'Direct measurement' refers to the direct monitoring of greenhouse gas emissions and, in theory, provides the most accurate evidence. However, it is expected that Scope 3 greenhouse gas emissions data will include estimation due to the challenges associated with direct measurement of Scope 3 greenhouse gas emissions.

B45 Estimation of Scope 3 greenhouse gas emissions involves approximate calculations of data based on assumptions and appropriate inputs. An entity that measures its Scope 3 greenhouse gas emissions using estimation is likely to use two types of input:

- (a) data that represents the entity's activity that results in greenhouse gas emissions (activity data). For example, the entity might use distance travelled as activity data to represent the transport of goods within its value chain.
- (b) emission factors that convert activity data into greenhouse gas emissions. For example, the entity will convert the distance travelled (activity data) into greenhouse gas emissions data using emission factors.

Data from specific activities within the entity's value chain

B46 An entity's measurement of its Scope 3 greenhouse gas emissions will be based on data obtained directly from specific activities within the entity's value chain (primary data), data not obtained directly from activities within the entity's value chain (secondary data), or a combination of both.

B47 In measuring an entity's Scope 3 greenhouse gas emissions, primary data is more likely to be representative of the entity's value chain activity and its greenhouse gas emissions than secondary data. Therefore, the entity shall prioritise—with all else being equal—the use of primary data.

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B48 Primary data for Scope 3 greenhouse gas emissions includes data provided by suppliers or other entities in the value chain related to specific activities in an entity's value chain. For example, primary data could be sourced from meter readings, utility bills or other methods that represent specific activities in the entity's value chain. Primary data could be collected internally (for example, through the entity's own records), or externally from suppliers and other value chain partners (for example, supplier-specific emission factors for purchased goods or services). Data from specific activities within an entity's value chain provides a more accurate representation of the entity's specific value chain activities and, therefore, will provide a better basis for measuring the entity's Scope 3 greenhouse gas emissions.

B49 Secondary data for Scope 3 greenhouse gas emissions is data that is not obtained directly from specific activities within an entity's value chain. Secondary data is often supplied by third-party data providers and includes industry-average data (for example, from published databases, government statistics, literature studies and industry associations). Secondary data includes data used to approximate the activity or emission factors. Additionally, secondary data includes primary data from a specific activity (proxy data) used to estimate greenhouse gas emissions for another activity. If an entity uses secondary data to measure its Scope 3 greenhouse gas emissions, it shall consider the extent to which the data faithfully represents the entity's activities.

Timely data that faithfully represents the jurisdiction of, and the technology used for, the value chain activity and its greenhouse gas emissions

B50 If an entity uses secondary data, it shall prioritise the use of activity or emissions data that is based on, or represents, the technology used in the value chain activity the data is intended to represent. For example, an entity might obtain primary data from its activities (for example, the specific aircraft model, distance travelled and travel-class used by employees when travelling) and would then use secondary data that represents the greenhouse gas emissions arising from those activities to convert the primary data into an estimate of its greenhouse gas emissions from air travel.

B51 If an entity uses secondary data, it shall prioritise activity or emissions data that is based on, or represents, the jurisdiction in which the activity happened. For example, an entity shall prioritise emission factors that relate to the jurisdiction in which the entity operates or in which the activity has taken place.

B52 If an entity uses secondary data, it shall prioritise activity or emissions data that is timely and representative of the entity's value chain activity during the reporting period. In some jurisdictions, and for some technologies, secondary data is collected annually and, therefore, the data is likely to be representative of the entity's current practice. However, some secondary data sources rely on information collected in a reporting period that is different from the entity's own reporting period.

Verified data

- B53 An entity shall prioritise Scope 3 greenhouse gas emissions data that is verified. Verification can provide users of general purpose financial reports with confidence that the information is complete, neutral and accurate.
- B54 Verified data might include data that has been internally or externally verified. Verification can take place in several ways, including on-site checking, reviewing calculations, or cross-checking of data against other sources. However, in some cases an entity might be unable to verify its Scope 3 greenhouse gas emissions without undue cost or effort. For example, the entity might be prevented from obtaining a complete set of verified data due to the volume of data or because the data is obtained from entities in the value chain that are separated by many tiers from the reporting entity, that is, entities that the reporting entity does not interact with directly. In such cases, an entity might need to use unverified data.

Disclosure of inputs to Scope 3 greenhouse gas emissions

- B55 An entity shall disclose information about the measurement approach, inputs and assumptions it uses to measure its Scope 3 greenhouse gas emissions in accordance with paragraph 29(a)(iii). This disclosure shall include information about the characteristics of the data inputs as described in paragraph B40. The purpose of this disclosure is to provide users of general purpose financial reports with information about how the entity has prioritised the highest quality data available, which faithfully represents the value chain activity and its Scope 3 greenhouse gas emissions. This disclosure also helps users of general purpose financial reports to understand why the measurement approach, inputs and assumptions the entity uses to estimate its Scope 3 greenhouse gas emissions are relevant.
- B56 As part of the requirement in paragraph 29(a)(iii), and to reflect how an entity prioritises Scope 3 data in accordance with the measurement framework set out in paragraphs B40–B54, the entity shall disclose information that enables users of general purpose financial reports to understand:
- (a) the extent to which the entity's Scope 3 greenhouse gas emissions are measured using inputs from specific activities within the entity's value chain; and
 - (b) the extent to which the entity's Scope 3 greenhouse gas emissions are measured using inputs that are verified.
- B57 This Standard includes the presumption that Scope 3 greenhouse gas emissions can be estimated reliably using secondary data and industry averages. In those rare cases when an entity determines it is *impracticable* to estimate its Scope 3 greenhouse gas emissions, the entity shall disclose how it is managing its Scope 3 greenhouse gas emissions. Applying a requirement is impracticable when the entity cannot apply it after making every reasonable effort to do so.

IFRS SUSTAINABILITY DISCLOSURE STANDARDS

Financed emissions

- B58 Entities participating in financial activities face risks and opportunities related to the greenhouse gas emissions associated with those activities. Counterparties, borrowers or investees with higher greenhouse gas emissions might be susceptible to risks associated with technological changes, shifts in supply and demand and policy change, which in turn can affect the financial institution that is providing financial services to these entities. These risks and opportunities can arise in the form of credit risk, market risk, reputational risk and other financial and operational risks. For example, credit risk might arise in relation to financing clients affected by increasingly stringent carbon taxes, fuel efficiency regulations or other policies; credit risk might also arise through technological shifts. Reputational risk might arise from financing fossil-fuel projects. Entities participating in financial activities, including commercial and investment banks, asset managers and insurance entities, are increasingly monitoring and managing such risks by measuring their financed emissions. This measurement serves as an indicator of an entity's exposure to climate-related risks and opportunities and how the entity might need to adapt its financial activities over time.
- B59 Paragraph 29 (a)(i)(3) requires an entity to disclose its absolute gross Scope 3 greenhouse gas emissions generated during the reporting period, including upstream and downstream emissions. An entity that participates in one or more of the following financial activities is required to disclose additional and specific information about its Category 15 emissions or those emissions associated with its investments which is also known as 'financed emissions':
- (a) asset management (see paragraph B61);
 - (b) commercial banking (see paragraph B62); and
 - (c) insurance (see paragraph B63).
- B60 An entity shall apply the requirements for disclosing greenhouse gas emissions in accordance with paragraph 29(a) when disclosing information about its financed emissions.

Asset management

- B61 An entity that participates in asset management activities shall disclose:
- (a) its absolute gross financed emissions, disaggregated by Scope 1, Scope 2 and Scope 3 greenhouse gas emissions.
 - (b) for each of the disaggregated items in paragraph B61(a), the total amount of assets under management (AUM) that is included in the financed emissions disclosure, expressed in the presentation currency of the entity's financial statements.
 - (c) the percentage of the entity's total AUM included in the financed emissions calculation. If the percentage is less than 100%, the entity shall disclose information that explains the exclusions, including types of assets and associated amount of AUM.

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- (d) the methodology used to calculate the financed emissions, including the method of allocation the entity used to attribute its share of emissions in relation to the size of investments.

Commercial banking

B62 An entity that participates in commercial banking activities shall disclose:

- (a) its absolute gross financed emissions, disaggregated by Scope 1, Scope 2 and Scope 3 greenhouse gas emissions for each industry by asset class. When disaggregating by:
 - (i) industry—the entity shall use the Global Industry Classification Standard (GICS) 6-digit industry-level code for classifying counterparties, reflecting the latest version of the classification system available at the reporting date.
 - (ii) asset class—the disclosure shall include loans, project finance, bonds, equity investments and undrawn loan commitments. If the entity calculates and discloses financed emissions for other asset classes, it shall include an explanation of why the inclusion of those additional asset classes provides relevant information to users of general purpose financial reports.
- (b) its gross exposure to each industry by asset class, expressed in the presentation currency of the entity's financial statements. For:
 - (i) funded amounts—gross exposure shall be calculated as the funded carrying amounts (before subtracting the loss allowance, when applicable), whether prepared in accordance with IFRS Accounting Standards or other GAAP.
 - (ii) undrawn loan commitments—the entity shall disclose the full amount of the commitment separately from the drawn portion of loan commitments.
- (c) the percentage of the entity's gross exposure included in the financed emissions calculation. The entity shall:
 - (i) if the percentage of the entity's gross exposure included in the financed emissions calculation is less than 100%, disclose information that explains the exclusions, including the type of assets excluded.
 - (ii) for funded amounts, exclude from gross exposure all impacts of risk mitigants, if applicable.
 - (iii) disclose separately the percentage of its undrawn loan commitments included in the financed emissions calculation.
- (d) the methodology the entity used to calculate its financed emissions, including the method of allocation the entity used to attribute its share of emissions in relation to the size of its gross exposure.

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Insurance

B63 An entity that participates in financial activities associated with the insurance industry shall disclose:

- (a) its absolute gross financed emissions, disaggregated by Scope 1, Scope 2 and Scope 3 greenhouse gas emissions for each industry by asset class. When disaggregating by:
 - (i) industry—the entity shall use the Global Industry Classification Standard (GICS) 6-digit industry-level code for classifying counterparties, reflecting the latest version of the classification system available at the reporting date.
 - (ii) asset class—the disclosure shall include loans, bonds and equity investments, as well as undrawn loan commitments. If the entity calculates and discloses financed emissions for other asset classes, it shall include an explanation of why the inclusion of those additional asset classes provides relevant information to users of general purpose financial reports.
- (b) the gross exposure for each industry by asset class, expressed in the presentation currency of the entity's financial statements. For:
 - (i) funded amounts—gross exposure shall be calculated as the funded carrying amounts (before subtracting the loss allowance, when applicable), whether prepared in accordance with IFRS Accounting Standards or other GAAP.
 - (ii) undrawn loan commitments—the entity shall disclose the full amount of the commitment separately from the drawn portion of loan commitments.
- (c) the percentage of the entity's gross exposure included in the financed emissions calculation. The entity shall:
 - (i) if the percentage of the entity's gross exposure included in the financed emissions calculation is less than 100%, disclose information that explains the exclusions, including type of assets excluded.
 - (ii) disclose separately the percentage of its undrawn loan commitments included in the financed emissions calculation.
- (d) the methodology the entity used to calculate its financed emissions, including the method of allocation the entity used to attribute its share of emissions in relation to the size of its gross exposure.

Cross-industry metric categories (paragraph 29(b)–(g))

- B64 In addition to information about an entity's greenhouse gas emissions, the entity is required to disclose information relevant to the cross-industry metric categories set out in paragraph 29(b)–(g).
- B65 In preparing disclosures to fulfil the requirements in paragraph 29(b)–(g), an entity shall:
- (a) consider the time horizons over which the effects of climate-related risks and opportunities could reasonably be expected to occur, described in accordance with paragraph 10.
 - (b) consider where in the entity's business model and value chain climate-related risks and opportunities are concentrated (for example, geographical areas, facilities or types of assets) (see paragraph 13).
 - (c) consider the information disclosed in accordance with paragraph 16(a)–(b) in relation to the effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period.
 - (d) consider whether industry-based metrics, as described in paragraph 32—including those defined in an applicable IFRS Sustainability Disclosure Standard or those that otherwise satisfy the requirements in IFRS S1—could be used to satisfy the requirements in whole or in part.
 - (e) consider the connections between the information disclosed to fulfil the requirements in paragraph 29(b)–(g) with the information disclosed in the related financial statements, in accordance with paragraph 21(b)(ii) of IFRS S1. These connections include consistency in the data and assumptions used—to the extent possible—and linkages between the amounts disclosed in accordance with paragraph 29(b)–(g) and the amounts recognised and disclosed in the financial statements. For example, an entity would consider whether the carrying amount of assets used is consistent with amounts included in the financial statements and would explain the connections between information in these disclosures and amounts in the financial statements.

Climate-related targets (paragraphs 33–37)

Characteristics of a climate-related target

- B66 Paragraph 33 requires an entity to disclose the quantitative or qualitative climate-related targets it has set, and any it is required to meet by law or regulation, including any greenhouse gas emissions targets. In disclosing these climate-related targets, the entity is required to disclose information about the characteristics of these targets as described in paragraph 33(a)–(h). If the climate-related target is quantitative, an entity is required to describe whether the target is an absolute target or an intensity target. An absolute target is defined as a total amount of a measure or a change in the total amount of a measure, whereas an intensity target is defined as a ratio of a measure, or a change in the ratio of a measure, to a business metric.
- B67 In identifying and disclosing the metric used to set a climate-related target and measure progress, an entity shall consider the cross-industry metrics and industry-based metrics. If the metric has been developed by the entity to measure progress towards a target, the entity shall disclose information about that metric in accordance with paragraph 50 of IFRS S1.

Greenhouse gas emissions targets

Gross and net greenhouse gas emissions targets

- B68 If an entity has a greenhouse gas emissions target, the entity is required to specify whether the target is a gross greenhouse gas emissions target or a net greenhouse gas emissions target. Gross greenhouse gas emissions targets reflect the total changes in greenhouse gas emissions planned within the entity's value chain. Net greenhouse gas emissions targets are the entity's targeted gross greenhouse gas emissions minus any planned offsetting efforts (for example, the entity's planned use of carbon credits to offset its greenhouse gas emissions).
- B69 Paragraph 36(c) specifies that if an entity has a net greenhouse gas emissions target it is required to also disclose a gross greenhouse gas emissions target. For the avoidance of doubt, if the entity discloses a net greenhouse gas emissions target, this target cannot obscure information about its gross greenhouse gas emissions targets.

Carbon credits

- B70 Paragraph 36(e) requires an entity to describe its planned use of carbon credits—which are transferable or tradeable instruments—to offset emissions to achieve any net greenhouse gas emissions targets the entity has set, or any it is required to meet by law or regulation. Any information about the planned use of carbon credits shall clearly demonstrate the extent to which these carbon credits are relied on to achieve the net greenhouse gas emissions targets.

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- B71 In accordance with paragraph 36(e), an entity is required to disclose only its planned use of carbon credits. However, as part of this disclosure, the entity might also include information about carbon credits it has already purchased that the entity is planning to use to meet its net greenhouse gas emissions target, if the information enables users of general purpose financial reports to understand the entity's greenhouse gas emissions target.

Appendix C

Effective date and transition

This appendix is an integral part of IFRS S2 and has the same authority as the other parts of the Standard.

Effective date

- C1 An entity shall apply this Standard for annual reporting periods beginning on or after 1 January 2024. Earlier application is permitted. If an entity applies this Standard earlier, it shall disclose that fact and apply IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information* at the same time.
- C2 For the purposes of applying paragraphs C3–C5, the date of initial application is the beginning of the annual reporting period in which an entity first applies this Standard.

Transition

- C3 An entity is not required to provide the disclosures specified in this Standard for any period before the date of initial application. Accordingly, an entity is not required to disclose comparative information in the first annual reporting period in which it applies this Standard.
- C4 In the first annual reporting period in which an entity applies this Standard, the entity is permitted to use one or both of these reliefs:
- (a) if, in the annual reporting period immediately preceding the date of initial application of this Standard, the entity used a method for measuring its greenhouse gas emissions other than the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004), the entity is permitted to continue using that other method; and
 - (b) an entity is not required to disclose its Scope 3 greenhouse gas emissions (see paragraph 29(a)) which includes, if the entity participates in asset management, commercial banking or insurance activities, the additional information about its financed emissions (see paragraph 29(a)(vi)(2) and paragraphs B58–B63).
- C5 If an entity uses the relief in paragraph C4(a) or paragraph C4(b), the entity is permitted to continue to use that relief for the purposes of presenting that information as comparative information in subsequent reporting periods.

**Approval by the ISSB of IFRS S2 *Climate-related Disclosures*
issued in June 2023**

IFRS S2 *Climate-related Disclosures* was approved for issue by all 14 members of the International Sustainability Standards Board.

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