



ASTANA INTERNATIONAL EXCHANGE'S VOLUNTARY SUSTAINABILITY REPORTING GUIDANCE

April 2026

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Abbreviations and Acronyms

AIFC	Astana International Financial Centre
AIX	Astana International Exchange
ARDFM	Agency for Regulation and Development of the Financial Market
CDSB	Climate Disclosure Standards Board
CO₂	Carbon dioxide
CSR	Corporate Social Responsibility
CSRD	Corporate Sustainability Reporting Directive
EFRAG	European Financial Reporting Advisory Group
ESG	Environment, Social, Governance
ESRS	European Sustainability Reporting Standards
GHG	Greenhouse gases
GRI	Global Reporting Initiative
IFRS	International Financial Reporting Standards
IIRC	International Integrated Reporting Council
IOSCO	International Organization of Securities Commissions
ISSB	International Sustainability Standards Board
KASE	Kazakhstan Stock Exchange
KPI	Key Performance Indicator
SASB	Sustainability Accounting Standards Board
SDGs	Sustainable Development Goals
TCFD	Task Force on Climate-related Financial Disclosures
TNFD	Task Force on Nature-related Financial Disclosures
TPT	Transition Plan Taskforce
UN SSE	United Nations Sustainable Stock Exchanges
VRF	Value Reporting Foundation

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Executive Summary

The AIX Sustainability Reporting Guidance has been developed to enhance transparency, comparability, and alignment of sustainability-related disclosures among AIX-listed companies. It supports issuers in producing consistent and decision-useful sustainability information aligned with global standards including the IFRS Sustainability Disclosure Standards.

The Guidance provides a practical framework for AIX issuers to:

- Enhance corporate awareness and accountability on sustainability-related financial information.
- Align reporting with globally recognized standards, including the IFRS Sustainability Disclosure Standards (IFRS S1 and S2), the Global Reporting Initiative (GRI) Standards, and the European Sustainability Reporting Standards (ESRS).
- Facilitate consistent, decision-useful disclosures that support informed investment and regulatory decisions.
- Prepare for the potential gradual transition from voluntary to 'comply or explain' sustainability reporting requirements in Kazakhstan.

Globally, sustainability reporting has evolved from voluntary corporate social responsibility (CSR) initiatives into a mainstream element of financial markets. The International Sustainability Standards Board's (ISSB) IFRS S1 and S2 Standards, endorsed by the International Organization of Securities Commissions (IOSCO), mark a major step toward a unified global baseline for investor-focused sustainability reporting.

Similarly, in Kazakhstan sustainability reporting is rapidly evolving, gradually transitioning from a voluntary practice to a mandatory requirement under advancing ESG regulations. Recent initiatives including the Agency for Regulation and Development of the Financial Market (ARDFM) ESG Guidelines (2023), Astana Financial Services Authority (AFSA) ESG Disclosure Guidance (2024) and AIX ESG Bond Framework, reflect a national shift toward harmonized sustainability disclosure. AIX-listed issuers are therefore well-positioned to lead the transition to globally interoperable ESG reporting practices.



The Guidance outlines a four-step sustainability reporting process designed to ensure structure, accountability, and clarity:

- **Set Reporting Foundations** – ensure top-level commitment to sustainability reporting, define report purpose and users, determine reporting criteria, establish the reporting scope, and allocate reporting responsibilities.
- **Determine Material Issues** – conduct financial and (where applicable) impact materiality assessments to determine key sustainability-related risks and opportunities, as well as impacts that will inform a list of material issues to report upon.
- **Translate Material Issues into Disclosures** – determine what information to disclose, select applicable standards and metrics (e.g. IFRS S1/S2, GRI, ESRS), and establish internal processes for measurement, verification, and reporting.
- **Communicate Effectively** – present disclosures in line with the requirements of IFRS Sustainability Disclosure Standards, including reporting principles, disclosure location and timing, and actions to build confidence in the reported information.

The Guidance follows a building-blocks approach. AIX issuers can align with the global baseline set by IFRS S1/S2 to address financially material risks and opportunities to meet the needs of investors, lenders, and capital markets. They may also extend their disclosures to cover material impacts to satisfy the needs of wider stakeholder circle by using GRI or ESRS Standards, depending on jurisdictional or stakeholder requirements.

The Guidance provides a coherent pathway for issuers to strengthen transparency, align with international standards, and meet the growing expectations of investors, regulators, and global capital markets. By adopting this guidance, AIX-listed companies can enhance competitiveness, attract sustainable finance, and contribute to Kazakhstan's transition toward a resilient, low-carbon economy.

Purpose of the Guidance

The sustainability disclosure landscape across global capital markets is evolving rapidly. Regulators, investors, and companies are increasingly prioritizing standardization, comparability, and accountability in sustainability disclosures. In light of recent developments in global disclosure standards, particularly the release of the IFRS Sustainability Disclosure Standards (IFRS S1 and S2), AIX with support from the UNDP Sustainable Finance Hub, has developed this Sustainability Reporting Guidance. This Guidance aims to assist AIX issuers in aligning their sustainability-related disclosures with IFRS S1 and S2, while also considering complementary international frameworks such as GRI and ESRS. By aligning with these standards now, AIX and its listed companies can better prepare for converging global expectations and enhance their attractiveness to international investors.

This Guidance is primarily intended for all companies listed on the AIX main market (including potential issuers) to report on their sustainability performance. The Guidance does not constitute a new reporting standard and neither replaces existing legal obligations nor imposes additional reporting requirements. This Guidance¹ avoids being prescriptive and is intended to be used by listed companies on a voluntary basis.

The Guidance aims to:

- Enhance corporate awareness of the importance of providing high-quality, transparent information on sustainability-related matters.
- Support listed companies in navigating the complex landscape of sustainability-related financial reporting.
- Facilitate the adoption of and alignment with robust international sustainability reporting standards.
- Integrate sustainability into corporate governance, strategy, risk management, and long-term value creation.
- Provide investors with the tools to better assess ESG risks and opportunities and make informed investment decisions.

¹ The Guidance will be further updated should there be significant developments in the global ESG reporting landscape.



Sustainability Reporting Landscape

Transition from Voluntary to Mandatory Sustainability Reporting

Over the past two decades, sustainability reporting has transitioned from a voluntary practice into a core element of corporate transparency and market integrity. The shift toward structured reporting was driven by a growing recognition that financial statements alone cannot capture material sustainability-related risks, opportunities, and impacts that influence long-term enterprise value and market stability.

Evidence of this shift is reflected in global reporting practices. According to KPMG's Survey of Sustainability Reporting 2024, sustainability disclosure has become "business as usual" for nearly all large global companies: 96% of the world's largest 250 companies (G250) and 79% of the top 100 companies (N100) report on ESG and sustainability issues, with GRI remaining the most frequently referenced set of standards². At the same time, voluntary disclosure is giving way to mandatory requirements, driven by regulators seeking to enhance consistency, comparability, and decision-useful information for investors.

This momentum is reinforced by regulatory initiatives across major markets. Jurisdictional initiatives – ranging from the EU's Corporate Sustainability Reporting Directive (CSRD) to mandatory climate reporting regimes in the UK, Japan, and Singapore – have firmly embedded sustainability reporting within regulatory systems. In parallel, IOSCO's endorsement of the ISSB Standards (IFRS S1/S2) representing more than 130 member jurisdictions and 95% of global financial markets – has strengthened confidence in a globally aligned baseline for sustainability disclosure. As of June 2025, 36 jurisdictions have either adopted or announced intentions to adopt IFRS S1 and S2³.

Indeed, among the key investors in Kazakhstan are countries that have already or are in the process of implementing IFRS S1 and S2 in their jurisdictions. The Netherlands, China, South Korea, the UK, and Singapore are in the process of implementing IFRS S1 and S2 standards, while Turkey has already introduced mandatory application, and Qatar has announced plans for gradual implementation of IFRS S1/S2 standards, focusing on large companies and financial institutions, including provisions for a transition period and voluntary application at the initial stages.

Given that AIX hosts Eurobonds, corporate bonds, and equity instruments – many of which are dual listed on the KASE and the London Stock Exchange (LSE)⁴ – cross-border listings and international debt issuances require alignment with the expectations of a global investor base. Adoption of internationally recognized sustainability disclosure standards – such as IFRS S1 and S2 supports issuers in enhancing transparency, improving comparability, and strengthening investor confidence across jurisdictions.

² The move to mandatory reporting: Survey of Sustainability Reporting 2024, <https://kpmg.com/dk/en/esg/survey-of-sustainability-reporting-2024.html>

³ Available at: <https://www.ifrs.org/news-and-events/news/2025/06/ifrs-foundation-publishes-jurisdictional-profiles-issb-standards/>

⁴ AIX. (n.d.). Allocation of Ministry of Finance' Eurobonds is completed. Retrieved from <https://aix.kz/allocation-of-ministry-of-finance-eurobonds-is-completed/>

Sustainability Disclosure Standards: Convergence and Interoperability

In recent years, sustainability reporting landscape has shifted from a fragmented system of overlapping frameworks and standards to an increasingly interoperable and aligned structure. Historically, companies reported under multiple voluntary initiatives such as the GRI, Sustainability Accounting Standards Board (SASB), Task Force on Climate-related Financial Disclosures (TCFD), and regional regulatory frameworks, creating inconsistencies and duplication. Recent reforms have driven consolidation around a common global baseline while accommodating local priorities.

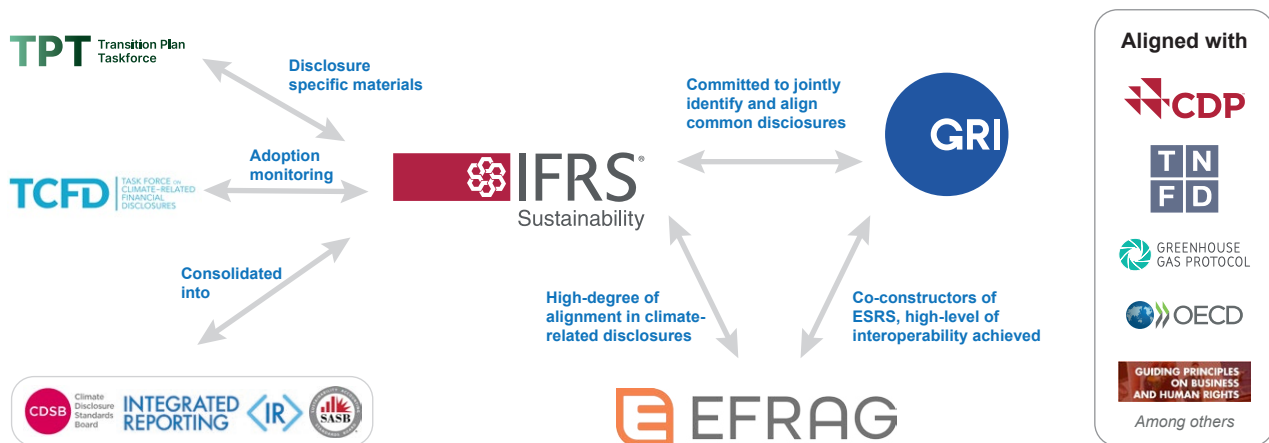
A major milestone in this evolution was the establishment of the ISSB under the IFRS Foundation in 2021. The ISSB Standards⁵ (IFRS S1 and S2), issued in 2023 (effective since January 1, 2024) define a global baseline for reporting sustainability-related financial information, focusing on risks and opportunities that could influence a company's cash flows, access to capital, or cost of capital. The ISSB Standards integrate sustainability information directly with financial reporting, supporting more consistent, comparable, and investor-focused disclosures.

The creation of the ISSB was accompanied by the consolidation of key organizations (Fig. 1) – the Value Reporting Foundation (which included SASB and the Integrated Reporting Framework (IIRC)) and the Climate Disclosure Standards Board (CDSB) were integrated into the IFRS Foundation. The TCFD Recommendations, including their architecture of governance, strategy, risk management, and metrics and targets, were fully incorporated into IFRS S1 and S2, ensuring continuity in climate-related reporting. The IFRS Foundation also assumed responsibility for the Transition Plan Taskforce (TPT) disclosure-specific materials, further embedding transition planning guidance into global standards.

The ISSB now serves as the central standard-setter for investor-focused sustainability disclosures, enhancing global consistency and comparability. The ISSB's approach can serve as a foundation within a broader “building blocks” architecture, enabling interoperability with regional and multi-stakeholder frameworks. In this context, “building blocks” means a two-layer structure: a common global baseline of investor-focused disclosures (ISSB Standards), and additional jurisdiction- or stakeholder-specific requirements that build on top of that baseline (e.g., broader impact disclosures, sector-specific metrics, or policy-driven topics). The baseline remains consistent across countries, while the add-on layer reflects local priorities. This model allows jurisdictions to adapt the global baseline to meet local policy and stakeholder needs while maintaining international consistency. Further details on the “building blocks” architecture are provided in [Chapter 3 \(A Global Plug-and-Play Approach\)](#).

⁵ The ISSB is currently developing additional topical standards beyond IFRS S2 to address critical sustainability issues such as biodiversity and human capital. For more details see: <https://www.ifrs.org/projects/work-plan/>.

Figure 1. Convergence and Interoperability of Sustainability Disclosure Frameworks



Key collaborations include:

- **GRI and ISSB:** strengthened collaboration through a 2024 MoU addendum, enhancing interoperability between the ISSB and GRI standards, including joint pilot work on biodiversity.
- **EFRAG (European Financial Reporting Advisory Group) and ISSB:** close cooperation to align ESRS and IFRS S2, especially on climate disclosures, enabling companies to meet both sets of requirements with consistent data points.
- **GRI and EFRAG:** worked together to co-construct the ESRS since 2021.
- **CDP (Carbon Disclosure Project):** Since 2024, CDP's full corporate questionnaire has been aligned with IFRS S2, reducing duplication and supporting global comparability. Despite the alignment the CDP questionnaire should not be interpreted as strictly fulfilling IFRS S2 requirements⁶.
- **TNFD (Taskforce on Nature-related Financial Disclosures):** the IFRS Foundation and TNFD have formalized collaboration to support sustainability-related reporting, with TNFD aligning its future technical work to ISSB developments.⁷
- **GHG Protocol** remains the primary methodology for emissions accounting across ISSB, GRI, and ESRS, maintaining consistency in Scope 1–3 measurement.
- **OECD Guidelines for Multinational Enterprises** provide internationally recognized principles on responsible business conduct and due diligence, informing governance, risk management, and value chain–related disclosures under IFRS S1/S2 and reinforcing alignment with impact-oriented frameworks such as GRI and ESRS.
- **UN Guiding Principles on Business and Human Rights (UNGPs)** – endorsed by the UN Human Rights Council as the global authoritative framework on business and human rights, the UNGPs establish expectations for human rights due diligence, remediation, and governance. These principles support the identification of material social risks and impacts and are embedded in GRI Standards and ESRS social disclosures, while also informing governance- and risk-related disclosures under IFRS S1/S2.

⁶ Mapping IFRS S2 to CDP's 2025 Questionnaire. Available at: https://cdn.cdp.net/cdp-production/cms/guidance_docs/pdfs/000/006/016/original/Mapping_IFRS_S2_to_CDP_2025_Questionnaire.pdf?1759219678

⁷ Source: IFRS Foundation. *IFRS Foundation and TNFD formalise collaboration*. https://www.ifrs.org/news-and-events/news/2025/04/ifrs-foundation-tnfd-formalise-collaboration/?trk=article-ssr-frontend-pulse_little-text-block

Kazakhstan's Sustainability Reporting Framework

Kazakhstan's sustainability reporting landscape is evolving rapidly, guided by a growing set of laws, regulations, guidelines, and institutional initiatives increasingly aligned with global practices.

- **AIFC ESG Debentures Framework (2024)**: Defines standards for issuing and listing green, social, and sustainability debt instruments within the AIFC regime, effective October 2024.⁸
- **AIFC ESG Disclosure Guidance (2024)**: Published by the Astana Financial Services Authority (AFSA) and effective from 14 October 2024, this voluntary guideline provides a structured ESG disclosure approach for entities operating under the AIFC jurisdiction, including banks, fund managers, and insurers. The guidance aligns with leading international frameworks and aims to promote best practice adoption.⁹
- **AIX Business Rules¹⁰ (latest update in 2024)**: Back in December 2022, AIX introduced a dedicated chapter on ESG-labelled bonds, defining eligibility, verification and disclosure criteria. To support sustainable market development, AIX waived initial listing fees and reduced annual trading fees for these instruments.¹¹
- **AIX Voluntary ESG Disclosure Guidance (2022)**: AIX supports the practice of voluntary sustainability disclosures. The exchange's website features the AIX Voluntary Disclosure Guidance for ESG Reporting, which provides issuers with recommendations on publishing reports covering environmental, social, and governance aspects.¹²
- **ARDFM ESG Reporting Guidelines (2023)**: Issued by the ARDFM, these guidelines (effective 2024) require banks and other financial institutions to establish ESG strategies, define measurable targets, monitor performance indicators, manage ESG-related risks, and ensure board-level oversight and compliance. These guidelines are voluntary until 2026, after which reporting becomes mandatory for financial institutions.¹³
- **Corporate Governance Code (Samruk-Kazyna) (2015)**: Approved by the Sovereign Wealth Fund Samruk-Kazyna in 2015, the Code applies to state-owned enterprises and encourages the integration of ESG principles into strategic planning, risk management, and corporate governance practices.¹⁴

⁸ AIFC ESG Debentures. Available at: <https://orderly.myafsa.com/articles/1.10.-aifc-esg-debentures>

⁹ AIFC ESG Disclosure Guidance. Available at: <https://orderly.myafsa.com/articles/aifc-environmental-social-and-governance-disclosure-guidance>

¹⁰ AIX Business Rules. Available at: https://www-aix-kz.s3.eu-central-1.amazonaws.com/uploads/2024/09/2024_09-AIX-Business-Rules_clean.pdf

¹¹ AIX; Market Consultation Paper No.9 (ESG-Labelled Bonds) and press releases. See: AIX waives the initial fee for public ESG bonds, 21 July 2023. <https://aix.kz/aix-waives-the-initial-fee-for-public-esg-bonds/> and Market Consultation Paper: https://www-aix-kz.s3.eu-central-1.amazonaws.com/uploads/2022/08/2022_08_Market-Consultation-Paper-No.9.pdf

¹² AIX Voluntary Disclosure Guidance for ESG Reporting. Available at: https://www-aix-kz.s3.eu-central-1.amazonaws.com/uploads/2022/05/AIX_ESG_Guide_May-2022_final.pdf

¹³ ARDFM Roadmap for the Implementation of ESG Principles in the Regulation of Kazakhstan's Financial Market. Available at: <https://www.gov.kz/memleket/entities/ardfm/documents/details/839001>

¹⁴ Corporate Governance Code of the Sovereign Wealth Fund "Samruk-Kazyna" JSC. Available at: https://sk.kz/documents/CG%20Code_en.pdf?ysclid=mihgj2me3u620562680

Market Practice and Disclosure Maturity

Market evidence indicates a divergence in disclosure maturity across issuer types:

- **Large and state-linked issuers** have been most active in institutionalizing sustainability disclosure practices: publishing reports aligned with frameworks such as GRI, TCFD (now largely integrated into ISSB approaches) and CDP; obtaining third-party ESG ratings; and aligning labelled-bond frameworks with international standards (ICMA Green Bond Principles, Climate Bonds taxonomy);¹⁵
- **Financial institutions** subject to ARDFM and AIFC guidance have increasingly formalized ESG governance, KPIs and risk-management processes, raising the quality of sectoral disclosures.
- **Mid-cap and smaller issuers** commonly limit public disclosure to CSR activities and high-level narratives, with limited reporting on material sustainability-related risks and opportunities. This heterogeneity reduces comparability and may constrain access to ESG-oriented capital¹⁶.

Implications and Strategic Considerations for AIX Issuers

Altogether, these developments highlight several key implications for AIX issuers:

- **Accelerating regulatory development:** Kazakhstan is rapidly enhancing its sustainability disclosure architecture, particularly in the financial sector, with a clear move toward international alignment.
- **Increasing investor expectations:** Domestic and global investors expect consistent, comparable, and decision-useful sustainability information to inform capital allocation and risk assessments.
- **Opportunity for alignment and leadership:** By adopting structured disclosure practices aligned with IFRS S1 and S2-and integrating GRI Standards and the ESRS for impact-focused reporting – issuers can enhance transparency, strengthen competitiveness, and improve readiness for future regulatory developments.

¹⁵ ESG and Climate Ratings. Available at: <https://sk.kz/ar2024/en/esg-and-climate-ratings.html>

¹⁶ AIFC, State of Sustainable Finance in Central Asia (2024). Available at: https://aifc.kz/wp-content/uploads/2024/07/1.3-ca-to-publish-eng_compressed.pdf



Driving Value through Sustainability Reporting

Key Users of Sustainability Reporting

ESG and sustainability-related information are used by a variety of stakeholders, with key areas of application indicated in Table 1.

Table 1. Stakeholder groups and how they use sustainability information

Stakeholder Group	How they use sustainability information
Regulators & Supervisors	Assess compliance with regulations, monitor systemic risks in the financial system, and ensure that institutions are managing environmental and social risks effectively
Boards & Management	Inform strategic decisions, align corporate governance with sustainability goals, and identify opportunities for long-term value creation through responsible business practices
Banks & Lenders	Evaluate the creditworthiness of borrowers, assess potential risks in their portfolios, and determine financing conditions based on a company's sustainability performance
Investors & Asset Managers	Make informed decisions about asset valuation, optimize portfolio allocation, and assess risk-adjusted returns, as they increasingly consider ESG factors in their investment strategies
Insurers	Inform underwriting processes, set risk pricing based on environmental and social factors, and evaluate the resilience of insured entities against climate-related risks
Customers	Make informed purchasing decisions, favor brands that demonstrate commitment to sustainability, and support companies that align with their values regarding environmental and social responsibility
Employees	Assess a company's commitment to social responsibility, influencing their decision to join or stay with an organization, and to engage in sustainability initiatives that enhance workplace culture
Suppliers	Ensure alignment with supply-chain standards, assess expectations for ethical sourcing, labor practices, and environmental impact, collaborate on sustainability initiatives, and manage risks associated with environmental and social factors in supply chains
Communities	Evaluate the social and environmental impacts of local businesses, engage in dialogue with companies, and advocate for initiatives that promote local development and sustainability
NGOs & Advocacy Groups	Hold companies accountable, advocate for improved practices, and collaborate with businesses on initiatives that address social and environmental challenges

Strategic Benefits of Sustainability Reporting for AIX Issuers

- **Efficiency & Innovation:** Companies can unlock opportunities by improving resource efficiency, transitioning to low-carbon energy, developing sustainable products and services and strengthening supply-chain resilience. These measures often yield returns that offset or exceed the costs of climate adaptation and mitigation.
- **Regulatory Compliance & Preparedness:** As sustainability regulations become more stringent, effective reporting helps organizations stay compliant with evolving legal requirements. This proactive approach minimizes the risk of penalties and enhances operational stability.
- **Reputation & Stakeholder Trust:** Transparent disclosure builds credibility with customers, employees, communities, and regulators, aligning corporate governance with social and environmental responsibilities.
- **Investor confidence & Access to Capital:** Investors increasingly rely on credible sustainability information to evaluate long-term viability, risk exposure and capital allocation. Transparent issuers often benefit from more favorable financing conditions and stronger valuations.
- **Risk Management & Resilience:** Sustainability reporting supports comprehensive risk management by identifying vulnerabilities related to climate change, resource use, regulatory shifts, and social expectations, enabling businesses to mitigate potential disruptions and strengthen resilience.
- **Strategic Alignment & Long-Term Value Creation:** Sustainability disclosures integrate ESG factors into corporate governance and strategic planning, helping firms manage risks, identify growth opportunities, and enhance competitive positioning in a sustainable economy.

When aligned with international standards such as the ISSB, GRI, and ESRS, sustainability reporting enhances a company's global competitiveness by ensuring that disclosures are transparent, comparable, and trusted across markets. This alignment attracts international investment and facilitates access to new markets, as investors increasingly prioritize transparency and responsible practices. By benchmarking against global peers, companies can drive continuous improvement and innovation in their sustainability initiatives. Additionally, adherence to these standards prepares organizations for evolving regulatory requirements, ensuring compliance and mitigating risks. Ultimately, embracing sustainability reporting unlocks key benefits that support growth and contribute to a more sustainable future.



Setting the Foundations: Key Concepts for Sustainability Disclosure

Concept of Materiality in Sustainability Reporting

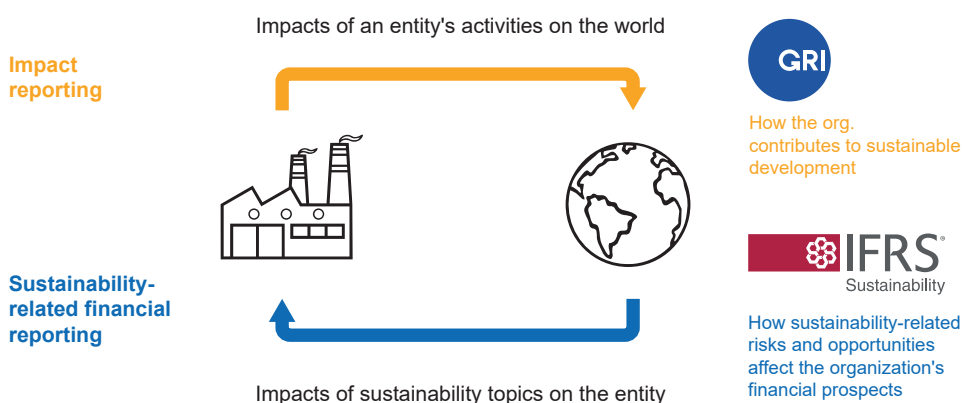
Materiality is a core concept in reporting and is central to both the preparation and assurance of disclosures. It functions as a filter for identifying information that could influence the decision-making of report users in relation to the reporting entity.

There are three key perspectives on materiality (see Table 2):

- **Financial materiality** – sustainability-related risks and opportunities, which significantly affect or could affect, negatively (risk) or positively (opportunity) the company's financial position, cash flows, access to finance or cost of capital in the short, medium or long term. Such information is particularly relevant for investors because, if omitted, misrepresented or obscured, it could reasonably influence their investment choices and decisions. This definition is consistent with IFRS S1 and S2.
- **Impact materiality** – positive and negative, actual and potential impacts of the reporting company's operations on the economy, environment and people. Such information meets the needs of multiple stakeholders, including investors, employees, customers, suppliers and local communities. This perspective aligns with GRI Standards.
- **Double materiality** combines both financial and impact perspectives. This approach is adopted by the ESRS.

Although these perspectives are distinct, they often intersect, and both provide critical insights for understanding the long-term value creation. Organizational impacts often become financially material; therefore, understanding these impacts enables a comprehensive view of all financial issues that could affect the company.

Figure 2. Sustainability Reporting and Materiality Perspectives¹⁷



This diagram illustrates the two-way relationship between a company and the world around it:

- **Sustainability-related financial reporting** (bottom arrow) examines how sustainability issues influence the entity's financial prospects.
- **Impact reporting** (top arrow) explores how the entity's operations and products affect people and planet.

¹⁷ Source: UNDP / GRI / IFRS Foundation

Together, these perspectives form a continuous feedback loop linking business performance with sustainable development outcomes.

IFRS Sustainability Disclosure Standards do not ignore the effects of an entity's activities (impacts) – they consider them if they affect financial performance. IFRS S1 requires disclosure of sustainability-related risks and opportunities that could reasonably be expected to affect an entity's cash flows, access to finance, or cost of capital over the short, medium, or long term. This assessment considers an entity's dependencies and sustainability-related financial impacts throughout its value chain.

Table 2 explains different concepts of materiality used in sustainability reporting, global frameworks that require or guide disclosures under each concept, the stakeholders that rely on this information for decision-making, and practical examples of application.

Table 2. Financial, Impact, and Double Materiality – Definitions and Examples

Type of Materiality	Definition	Standards	Stakeholders	Examples
Financial Materiality (“Outside-In”)	Information is financially material if sustainability-related risks or opportunities could reasonably be expected to affect an entity's cash flows, access to finance, or cost of capital over the short, medium, or long term	IFRS S1 – General Requirements for Disclosure of Sustainability-related Financial Information IFRS S2 – Climate-related Disclosures	Institutional investors, equity analysts, credit rating agencies, lenders, regulators, stock exchanges, financial auditors	<ul style="list-style-type: none"> • A cement producer's operating costs increase under a carbon tax or expanded emissions trading scheme, affecting margins and investor risk assessment. • A mining operator faces production losses and increased costs as water-use restrictions tighten in water-stressed regions. • A bank with exposure to carbon-intensive sectors faces higher expected credit losses if climate risk is integrated into prudential regulation or stress testing. • An agricultural producer experiences supply chain disruptions and higher hedging costs due to extreme weather volatility.

Type of Materiality	Definition	Standards	Stakeholders	Examples
Impact Materiality (“Inside-Out”)	Information is materially impactful if an entity’s activities cause or contribute to significant actual or potential effects on the environment, people (including human rights), or the economy, regardless of financial implications	GRI Standards	Local communities, employees and labor unions, NGOs, civil society organizations, environmental advocacy groups, human rights bodies, consumers, investors, policymakers, capital markets.	<ul style="list-style-type: none"> • A hydropower project degrades river ecosystems and fish populations, undermining local livelihoods. • A chemical plant’s wastewater discharge contaminates soil and groundwater, harming community health and agriculture. • A logistics company increases congestion and noise pollution in residential areas, affecting community welfare. • Insufficient workplace safety measures lead to higher accident rates, affecting workers and eroding community trust.

Type of Materiality	Definition	Standards	Stakeholders	Examples
<p>Double Materiality (Combined Lens)</p>	<p>Combines both perspectives: a matter is material if it meets either financial or impact criteria. Recognizes that impacts can become financial risks over time</p>	<p>ESRS</p>	<p>Investors, regulators, ESG rating agencies, supply chain partners, local communities, advocacy groups, media</p>	<ul style="list-style-type: none"> • Natural gas flaring by an oil producer: <ul style="list-style-type: none"> – Financial: potential penalties, stranded assets, and investor divestment. – Impact: increased emissions, local air pollution. • Tailings mismanagement in the metals sector: <ul style="list-style-type: none"> – Financial: asset impairments, liability provisions, loss of financing due to ESG risk. – Impact: land and water contamination, ecosystem damage. • Supplier labor violations in retail: <ul style="list-style-type: none"> – Financial: supply chain disruption, reputational damage, reduced sales. – Impact: unsafe labor conditions, human rights breaches. • Data-center expansion in telecommunications: <ul style="list-style-type: none"> – Financial: high exposure to energy-price shocks, increased capex on efficiency upgrades. – Impact: significant energy use and GHG emissions impacting national inventories.

Sustainability Disclosure Standards

IFRS Sustainability Disclosure Standards

The ISSB published two foundational standards, on June 26, 2023 – IFRS S1: General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2: Climate-related Disclosures. These apply to annual reporting periods beginning on or after 1 January 2024.¹⁸

- **IFRS S1** requires entities to disclose information about all sustainability-related risks and opportunities that could reasonably be expected to affect the company's cash flows, access to finance, or cost of capital, that is, factors that influence enterprise value.
- **IFRS S2** specifies requirements for identifying, measuring and disclosing information about climate-related risks and opportunities, ensuring that climate data presented to primary users of general-purpose financial reports is decision-useful. IFRS S2 is designed to complement IFRS S1, providing detailed requirements for climate disclosure while IFRS S1 covers broader sustainability topics.

Conceptual Foundations

Key conceptual features of IFRS S1 include fair presentation, financial materiality, consistent reporting boundaries (same as general-purpose financial statements), and connected disclosures that integrate sustainability and financial information in a coherent reporting entity.¹⁹

Core Content Areas

IFRS S1 and S2 follow the four-pillar structure (Figure 3) originating in the TCFD framework – **Governance, Strategy, Risk Management, and Metrics & Targets** – thereby enabling continuity for companies previously reporting under TCFD.

¹⁸ IFRS Foundation. *ISSB issues inaugural global sustainability disclosure standards*. <https://www.ifrs.org/news-and-events/news/2023/06/issb-issues-ifrs-s1-ifrs-s2/>

¹⁹ IFRS Foundation. IFRS S1: General Requirements for Disclosure of Sustainability-related Financial Information, 26 June 2023 – <https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s1-general-requirements/>

Figure 3. Core content areas of IFRS Sustainability Disclosure Standards²⁰



GRI Standards

For impact-oriented disclosures (i.e., “inside-out” materiality), the globally accepted standard set remains the GRI Standards. GRI offers a modular system (Universal, Topic, and Sector Standards) that enables companies to report significant social, environmental and governance impacts on the economy, environment and communities, addressing stakeholders beyond capital providers.²¹

GRI helps organizations:

- promote transparency and accountability,
- report systematically on impacts across environmental, social and economic dimensions provide a globally consistent structure that can be aligned with other frameworks.

The framework consists of three key components:

a. Universal Standards

Applicable to all organizations, these set the foundation for reporting:

- **GRI 1: Foundation 2021** – Explains the system, reporting principles, and how to apply the standards.
- **GRI 2: General Disclosures 2021** – Covers contextual information such as organizational profile, governance, policies, and stakeholder engagement.
- **GRI 3: Material Topics 2021** – Guides companies in determining and reporting on their material sustainability topics.

²⁰ For a detailed description of the IFRS sustainability disclosure standards, please refer to IFRS’s webpage. For guidance on how to make the transition from the TCFD recommendations to IFRS Sustainability Disclosure Standards, please refer to the IFRS Knowledge Hub: <https://www.ifrs.org/sustainability/knowledge-hub/making-the-transition-from-tcf-d-to-issb/>.

²¹ Global Reporting Initiative. GRI Standards (2021)—<https://www.globalreporting.org/standards/>

b. Topic Standards

Each standard covers disclosures related to a specific topic:

- **Economic (GRI 200 series)** – e.g., anti-corruption, procurement practices, economic performance.
- **Environmental (GRI 300 series)** – e.g., energy, emissions, biodiversity, waste, water.
- **Social (GRI 400 series)** – e.g., labor practices, human rights, community engagement, diversity.

c. Sector Standards (Emerging Component)

Sector-specific standards are being developed to address **industry-specific impacts and disclosures**. These enhance relevance and comparability across sectors. The Sector Standards for **Oil and Gas** (GRI 11), **Coal** (GRI 12), **Agriculture, Aquaculture and Fishing** (GRI 13), and **Mining** (GRI 14) have been released and are available for public use²².

European Sustainability Reporting Standards (ESRS)

ESRS are based on the principle of double materiality, requiring companies to report information that is material from both financial perspective (how sustainability-related matters affect enterprise value), and impact perspective (how the undertaking impacts people and the environment). This dual focus distinguishes ESRS from purely investor-oriented standards and positions them as a comprehensive framework for both financial markets and broader stakeholder accountability.

Developed by EFRAG and adopted by the European Commission in July 2023, ESRS have been simplified under the Commission's 2025 Omnibus initiative²³ and as of January 2026 are moving through the EU adoption process.

ESRS aim to:

- Ensure consistent, comparable, and reliable sustainability information across EU capital markets.
- Enable stakeholders (investors, regulators, and civil society) to assess sustainability-related risks, opportunities, and impacts.
- Support the integration of sustainability considerations into corporate strategy, governance, and risk management.

Similarly to IFRS Sustainability Disclosure Standards and GRI, ESRS combine cross-cutting requirements with topic-specific disclosures. The framework consists of three main components:

²² GRI Sector Program. For more details see: [GRI – Sector Program](#)

²³ The European Omnibus Package is a suite of legislative measures introduced by the European Commission to streamline, simplify and update existing sustainability disclosure requirements. The Omnibus Package is expected to refine ESRS's structure and content in line with evolving stakeholders and regulatory expectations. Available at: [Omnibus I – European Commission](#)

a. Cross-Cutting Standards

These apply to all companies and set out general principles and disclosure requirements.

- **ESRS 1 – General Requirements:** Defines key concepts, reporting principles, reporting boundaries, and the double materiality assessment process.
- **ESRS 2 – General Disclosures:** Sets out mandatory disclosures applicable to all undertakings, including governance, strategy, risk management, policies, and metrics.

b. Topical Standards

Topical standards specify disclosure requirements for material environmental, social, and governance topics.

Following recent revision proposals, ESRS are moving toward a more materiality-driven and proportionate approach, allowing companies to report only on material topics and sub-topics identified through the double materiality assessment, rather than treating all of them as mandatory.²⁴

The topical standards are grouped as follows:

- **Environment (E1–E5):** Climate change, pollution, water and marine resources, biodiversity and ecosystems, and resource use and circular economy.
- **Social (S1–S4):** Own workforce, workers in the value chain, affected communities, and consumers/end-users.
- **Governance (G1):** Business conduct (e.g., ethics, anti-corruption, and political engagement).

c. Sector-Specific Standards (Guidance)

Under the Omnibus simplification initiative mandatory sector-specific ESRS standards will not be developed. Instead, depending on market demand, the Commission may develop non-binding sector-specific guidance.

Both the ISSB and GRI have strong collaboration with EFRAG to enhance alignment and ensure a high degree of interoperability between their respective sustainability reporting standards.

Note: Use of Other Frameworks (GRI, ESRS, others) under IFRS S1

Entities may use other frameworks for two distinct purposes:

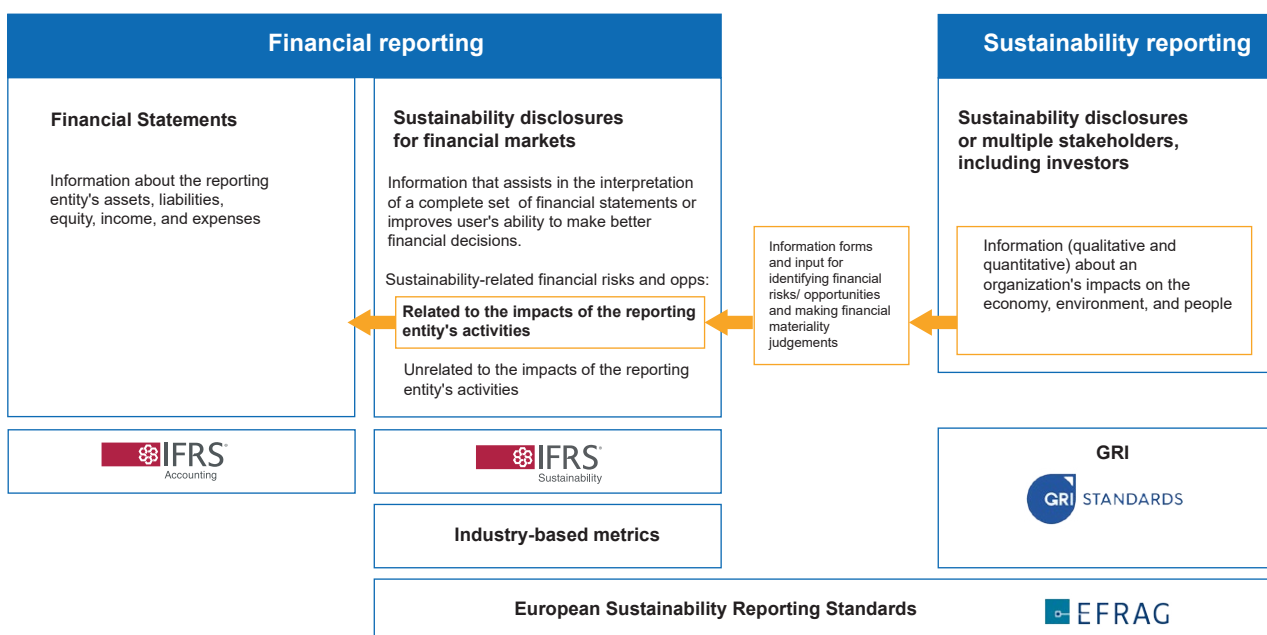
- To meet IFRS S1 objectives (“supporting use”): When such frameworks help identify or disclose information about sustainability-related risks and opportunities that could affect the entity’s prospects.
- To provide additional disclosures (“supplementary use”): When entities voluntarily report on impact-material or jurisdiction-specific topics beyond the IFRS S1 objective.

²⁴ Source: <https://www.efrag.org/en/draft-simplified-esrs> Commission Delegated Regulation (EU) 2023/2772 (Eur-Lex), OJ (22.12.2023).

A Global Plug-and-Play Approach

A global “plug-and-play” approach refers to the ability of entities and jurisdictions to combine complementary sustainability reporting standards in a modular way, rather than relying on a single, monolithic framework. This approach recognizes that different standards serve different purposes – such as investor-focused financial materiality or broader impact accountability – and that growing interoperability allows them to be used together coherently. Under this approach, entities may use ESRS or combine ISSB Standards (IFRS S1/S2) with GRI – or other impact-oriented frameworks (i.e. ESRS), by leveraging growing interoperability between standards. This “plug-and-play” approach enables issuers to meet investor needs while addressing broader stakeholder impacts.²⁵

Figure 4. A Global Plug-and-Play Approach to Sustainability Reporting



The “plug-and-play” model shown in Figure 4 illustrates how major global frameworks work together:

- **Financial Reporting** (IFRS Accounting Standards): provide the foundation through audited financial statements.
- **Sustainability Disclosures for Financial Markets** (IFRS S1 & S2): Supply decision-useful information to investors by explaining how sustainability-related risks and opportunities affect enterprise value. These disclosures ensure connectivity between sustainability data and financial statements.
- **Sustainability Disclosures for Multiple Stakeholders, including investors** (GRI Standards): Supply decision-useful information to multiple stakeholders, presenting qualitative and quantitative information on a company's impact on the economy, environment, and people.

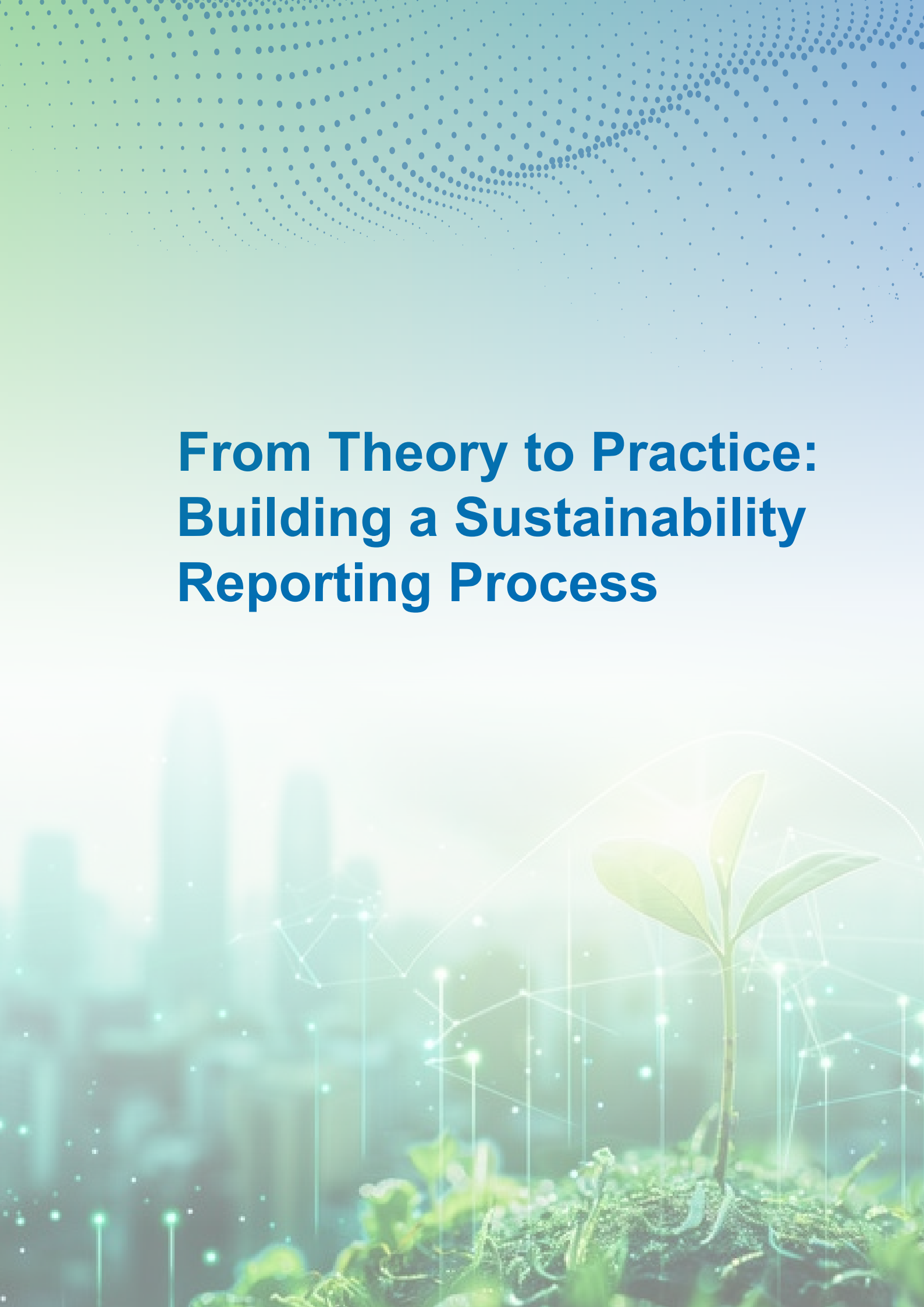
²⁵ IFRS Foundation & GRI. Interoperability Guidance for ISSB Standards and GRI Standards, 2023 – <https://www.ifrs.org/content/dam/ifrs/supporting-implementation/issb-standards/esrs-issb-standards-interoperability-guidance.pdf>

- **Sustainability Disclosures Addressing Both Perspectives (ESRS):** Integrate financial materiality and impact materiality within a single reporting framework. ESRS enable entities to meet the information needs of capital markets while also reporting on significant impacts on the economy, environment, and society, thus bridging investor-focused and multi-stakeholder disclosures.

The arrows linking the boxes illustrate the structured flow of information across reporting layers. Impact-related disclosures on an entity's effects on the economy, environment, and people inform the identification of sustainability-related risks and opportunities that may affect enterprise value. These inputs support financial materiality assessments under IFRS S1 and S2 and are reflected in investor-focused sustainability disclosures, which are connected to and contextualized by the financial statements. In this way, the arrows demonstrate the linkage between impact information, financial materiality judgments, and financial reporting, with ESRS bridging impact- and enterprise value-based perspectives.

This integrated architecture allows jurisdictions and companies “plug in” different standards depending on regulatory requirements and stakeholder expectations while maintaining global comparability.

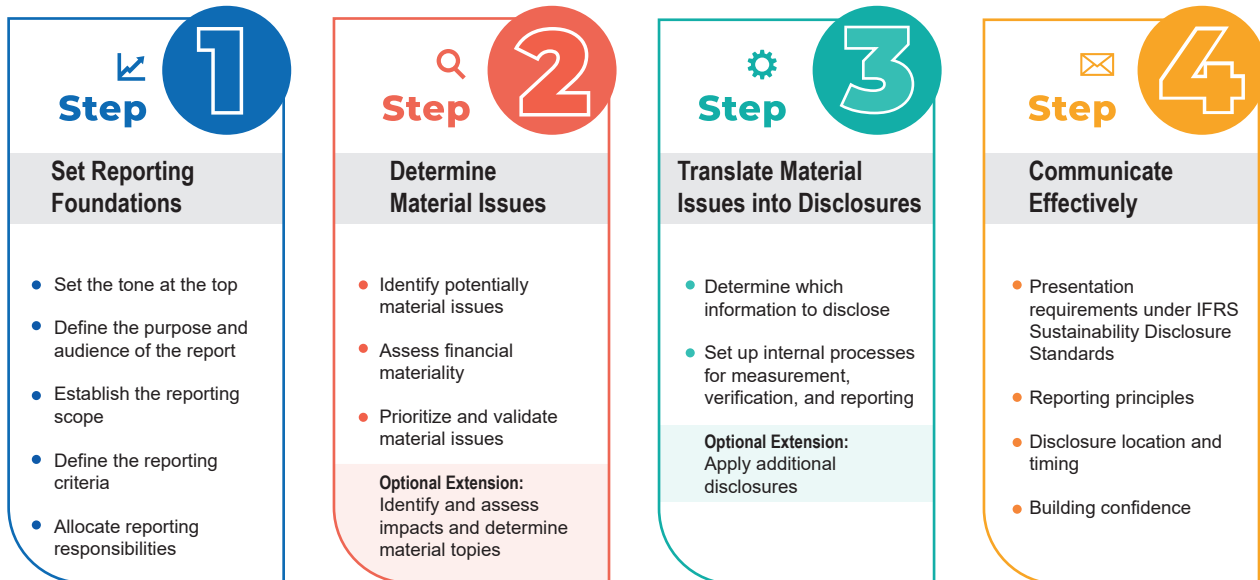
By reporting in accordance with the IFRS S1/S2 with the GRI Standards and, where relevant, ESRS, organizations can deliver an interconnected, decision-useful view of both financial performance and sustainability impact. This enhances comparability, reduces reporting duplication, and strengthens the confidence of investors, regulators, and stakeholders, contributing to more transparent and sustainable capital markets.



From Theory to Practice: Building a Sustainability Reporting Process

The sustainability reporting process follows a four-step model (Figure 5) that enables AIX issuers to prepare disclosures that meet investor expectations, support cross-listing requirements, and enhance competitiveness in global capital markets.

Figure 5. Sustainability reporting process



Step 1: Set Reporting Foundations

Objective

To establish the foundational governance and strategic parameters for sustainability reporting, including leadership commitment, reporting purpose and audience, scope, reporting criteria, and clear allocation of responsibilities.

a. Set the tone at the top

Effective sustainability reporting begins with clear leadership from the top. The board and executive management should explicitly treat sustainability-related financial disclosures as part of the organization's core reporting and risk-management responsibilities. This includes formally assigning oversight of sustainability-related risks and opportunities to the board or a designated board committee, embedding these topics into the regular board agenda.

b. Define report purpose and audience

Identify the primary users of the report who depend on the disclosed information to inform capital allocation, business model and strategic decisions, and operational performance. They may include investors, regulators, ESG rating agencies, supply chain partners, local communities, advocacy groups, media, and others. The purpose of the report therefore could be alignment with investor expectations, preparation for cross-listing on foreign exchanges, regulatory compliance, demonstrate voluntary leadership and commitment.

c. Establish the reporting scope

Identify which entities that the organization controls or has an interest in will be covered in the report. Clear reporting boundaries ensure consistency between financial and sustainability disclosures and ensure that sustainability-related risks are assessed at the same organizational level as financial risks. Under IFRS Sustainability Standards, the reporting boundary must align with that of the entity's general-purpose financial statements²⁶.

d. Define the reporting criteria

The purpose and audience of the report suggest which reporting standards to use (refer to Chapter 3, Sustainability Disclosure Standards).

e. Allocate reporting responsibilities

High-quality sustainability reporting requires reliable governance structures, clearly assigned responsibilities and coordinated execution:

- **Board and executive oversight:** Commitment to oversee, approve, and ensure the integrity of sustainability-related disclosures from the Board or a designated committee (e.g., Audit, Risk, or Sustainability Committee). This includes monitoring progress, validating key assumptions, and ensuring alignment with the organization's strategic objectives.
- **Management responsibility:** Defined functional ownership to a specific management-level position, for instance, CFO for data quality and integration with financial reporting; CSO or sustainability lead for strategy and risk management.
- **Cross-departmental collaboration:** Establish cross-functional sustainability or ESG teams with defined roles, responsibilities, and escalation pathways, as well as adequate internal controls for sustainability-related information.

Governance processes established here form part of the Governance pillar under IFRS S1 and S2 (see Step 3, Governance).

Outcome

A clearly defined and governed sustainability reporting framework is in place, with leadership alignment, a well-articulated reporting purpose and audience, an agreed reporting scope and criteria, and clearly assigned roles and responsibilities to ensure that the sustainability report focuses on what truly matters and prepares the organization for a robust materiality assessment in Step 2.

²⁶ IFRS S1, para. 20. Available at: <https://www.ifrs.org/content/dam/ifrs/publications/pdf-standards-issb/english/2023/issued/part-a/issb-2023-a-ifrs-s1-general-requirements-for-disclosure-of-sustainability-related-financial-information.pdf?bypass=on>

Step 2: Determine Material Issues

Objective

To identify sustainability-related issues – including those raised by key stakeholders in [Step 1](#) that could materially affect an organization’s cash flows, cost of capital, or access to capital. A structured and transparent materiality assessment, together with clear reporting on how the assessment was performed enables AIX issuers to produce meaningful, credible, and decision-useful disclosures.

a. Identify potentially material issues

Identifying the sustainability-related risks and opportunities that could reasonably be expected to affect the entity’s cash flow, access to finance, or cost of capital over the short, medium, or long term requires an understanding of the entity’s business model, operations and value chain, and operating environment.

Therefore, the entity should consider:

- Direct and indirect interactions with its stakeholders, society, the economy, and the natural environment across its entire value chain.
- Key resources and relationships, such as natural, manufactured, intellectual, human, social or financial capitals, on which the entity depends and which it also affects. They can be internal – such as the entity’s workforce, its know-how or its organizational processes – or external – such as materials and services the entity needs to access or the relationships it has with suppliers, distributors and customers.
- The entity’s dependencies and impacts on those resources and relationships, positive or negative effects arising from these interactions.
- The sustainability-related risks and opportunities that arise from those dependencies and impacts including those linked to climate change and other environmental or social factors that could influence enterprise value.

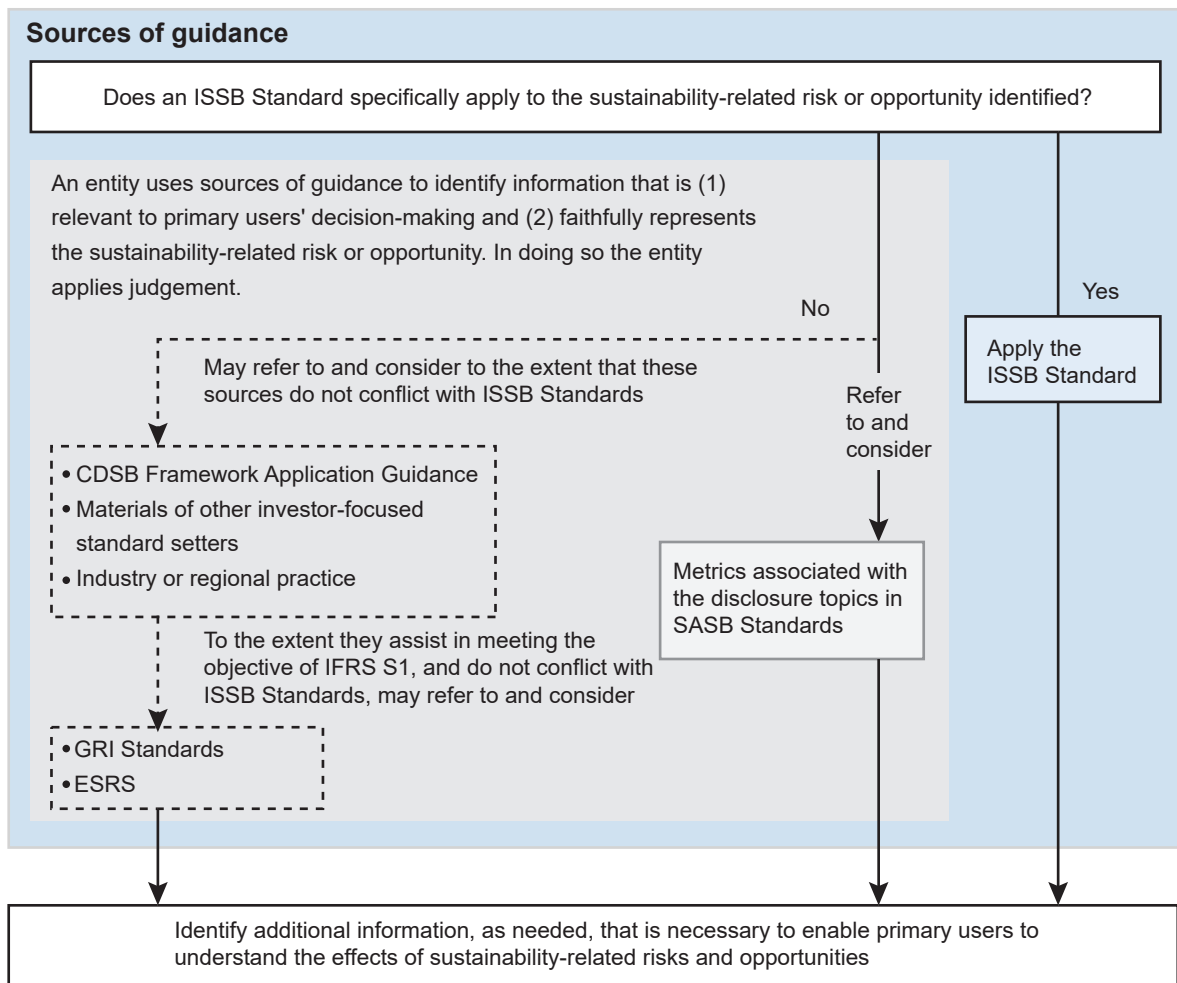
For example, when a company’s business model relies on a natural resource such as water, it both depends on the resource (dependency) and has the ability to influence its condition. A decline in the resource’s quality or availability – caused by internal operations or external factors – can disrupt operations, challenge strategic plans, and negatively affect financial results (risk). Conversely, actions that support the sustainable management or restoration of the resource can enhance operational stability and financial performance (opportunity).

To identify sustainability-related risks and opportunities the entity should:

1. Leverage **internal sources** of information, including the outcomes of the entity's strategic planning and risk management processes, and internal policies and procedures.
2. Use **external sources** of information, including legal and regulatory environment, industry analysis, peer group benchmarking, external ratings, reports and statistics. Engaging with investors can provide valuable insights into which sustainability issues they consider the most significant.
3. Refer to the **sources of guidance** outlined in IFRS S1 – when identifying material sustainability-related risks and opportunities, an entity shall apply the relevant topical IFRS Sustainability Disclosure Standard that specifically applies to that sustainability-related risk or opportunity. In the absence of a specific Standard, the entity shall refer to the industry-specific SASB Standards and may also consider the CDSB Framework Application Guidance, pronouncements from other standard-setting bodies, and practices of entities in the same industry or region.

Figure 6 shows the decision process for identifying and applying the right sources of guidance under IFRS S1.

Figure 6. Decision process for application of IFRS S1



An entity is not required to conduct an exhaustive search to identify sustainability-related risks and opportunities. It shall **use all reasonable and supportable information available** at the reporting date without incurring undue cost or effort. What constitutes undue cost or effort depends on the entity's specific circumstances and requires balancing the cost and effort involved with the benefits to primary users. Information already used in financial reporting, strategic planning, and risk management is considered available without undue cost or effort.

Example:

A manufacturing company identifies energy price volatility as a sustainability-related risk using information already included in its procurement records, operating cost analysis, and enterprise risk register. Without commissioning new studies or collecting additional datasets, the company assesses how rising energy costs could affect production expenses and margins. Based on this existing information, management identifies an opportunity to improve energy efficiency through equipment upgrades that were already under consideration in its capital expenditure plan. This assessment relies solely on information used in financial planning and risk management processes and therefore does not require undue cost or effort.

Note: IFRS S1 and S2 contain more detailed disclosure requirements compared to TCFD. In particular, when identifying sustainability-related risks and opportunities, IFRS S1 and S2 require entities to consider industry-specific disclosures.

b. Assess financial materiality

Once potential material topics are mapped, entities evaluate which issues are financially material under IFRS S1/S2. This requires assessing the magnitude and likelihood of potential financial effects of the sustainability-related risks or opportunities on the entity and understanding how these factors relate to the company's overall enterprise value creation model. Note that materiality assessments are entity specific. Therefore, no universal thresholds or predefined criteria can determine what is material in each situation.

Entities should consider:

- **Magnitude of the effect on financial performance:** How much sustainability-related factors may affect cash flow, revenues, costs, assets, and liabilities, access to and cost of capital.
- **Time horizons and uncertainties:** Whether the effects are short-, medium-, or long-term, and how uncertainty may influence their magnitude. While events expected to occur in the distant future are generally less likely to be material, some sustainability-related risks or opportunities may still be material due to their high relevance or scrutiny by users, regardless of timing or magnitude.

- **All pertinent facts and circumstances:** When assessing possible outcomes, entities should consider all relevant facts and circumstances. While information about a possible event is more likely to be material when its effects are significant and the event is likely to occur, low-probability but high-impact outcomes may also be material when viewed in aggregate with similar risks.
- **Connectivity of information:** How identified sustainability issues link to the company's strategy, business model, and value chain.
- **Qualitative and quantitative evidence:** Combining measurable data (e.g., financial exposure, scenario analysis) with qualitative insights (e.g., stakeholder expectations, reputational risk).

Example:

A commercial bank identifies climate-related credit risk as a potential material issue. Analysis reveals that 25% of its lending exposure stems from high-emission industries such as transportation. Scenario analysis shows that higher carbon pricing could increase non-performing assets by 2–3% (quantitative evidence). Investor and regulatory feedback highlight the growing expectation for transparent climate risk disclosure and portfolio decarbonization strategies while media reports emphasize the reputational risk of financing carbon-intensive projects (qualitative evidence). Under IFRS S2, this issue qualifies as financially material.

Materiality Checklist²⁷

Identifying potentially material information

- Does the information affect the company's cash flow, access to and cost of capital, given the company's own circumstances?
- Is the information material based on the nature or magnitude, or both, of the items to which it relates and in the context of the company's sustainability-related financial disclosures as a whole?
- Would the information's omission, misstatement or obscuring reasonably be expected to affect primary users' decisions and/or compromise their common information needs?
- Have the requirements of the relevant Standards been taken into account?
- Have you considered the other sources of guidance referred to in IFRS S1?
- Is there additional company-specific information about sustainability-related risks and opportunities that is not included in the sources of guidance and would be decision-useful to investors?

Making materiality judgements

- Is the information identified either individually or in combination with other information, material in the context of the company's sustainability-related financial disclosures taken as a whole?
- Have you considered both quantitative and qualitative factors?
- Have you considered the potential effect of future events on amount, timing and uncertainty of the company's future cash flows over the short, medium and long term?
- Have you considered the range of possible outcomes and the likelihood of the possible outcomes within that range?

Avoiding obscuring material information

- Have you ensured that material information is clear and distinguishable from immaterial information?
- Have you ensured that items of information that are dissimilar are not inappropriately aggregated?
- Have you ensured that items of information that are similar are not inappropriately disaggregated?

²⁷ Adopted from UN SSE Model Guidance on Sustainability-related Financial Disclosures, 2024; https://sseinitiative.org/sites/sseinitiative/files/publications-files/issb-model-guidance-for-exchanges-v-2024a1_0.pdf

Assessing information to disclose

- Does the information provide a complete, neutral and accurate depiction of those sustainability-related risks and opportunities?
- Is information disclosed comparable, verifiable, timely and understandable?
- Does the information disclosed cover the same reporting period as the related financial statements?
- Are data and assumptions used in preparing the sustainability-related financial disclosures consistent with the corresponding data and assumptions used in preparing the related financial statements?

c. Prioritize and validate material issues

After assessing significance, entities should rank topics by their relevance to both financial performance and stakeholder expectations. Visualizing results through a materiality matrix helps demonstrate prioritization and internal alignment (See Figure 7).

Figure 7. Materiality Matrix²⁸

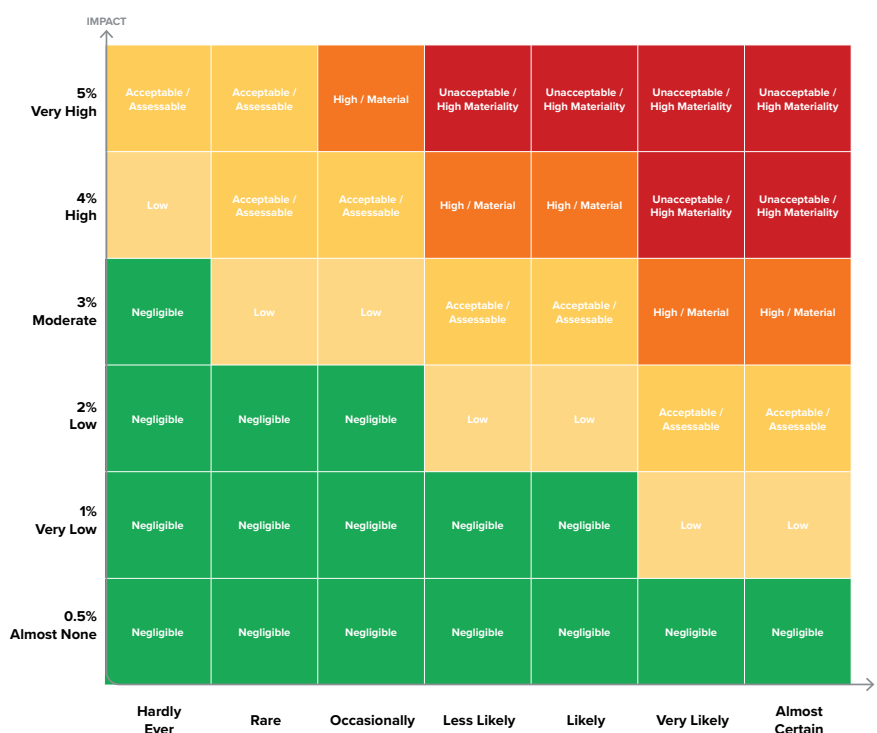


Figure 7 illustrates financial materiality matrix by plotting risks and opportunities based on two dimensions: “Impact” (the magnitude of financial effect) and “Probability” (the likelihood of occurrence), helping to prioritize issues that could significantly influence the company’s financial position, performance, or cash flows.

²⁸ Turkish airlines, TSRS COMPLIANT SUSTAINABILITY REPORT. Available at: [2024-tsr-compliant-sustainability-report.pdf](https://www.turkishairlines.com/2024-tsr-compliant-sustainability-report.pdf)

Entities should also ensure robust governance to validate the results of materiality assessment:

- Present preliminary results to senior management and the Board for review.
- Ensure alignment with corporate strategy, risk management, and financial planning.
- Document the rationale, thresholds, and methodology used for determinations.

An entity is required to reassess its materiality judgements at each reporting date to reflect any changes in circumstances or assumptions. As a result of shifts in the entity's operations or external environment, certain information disclosed in prior periods may no longer be material, while information not previously disclosed may become material.

Optional extension: Identify and assess impacts and determine material topics

If in [Step 1](#) the entity has decided to produce a multi-stakeholder-focused report and is aiming to report using double materiality, the financial assessment above should be complemented by an impact materiality analysis that captures how the organization affects people, the environment, and the economy.

Double materiality combines both lenses – *financial materiality* and *impact materiality*—recognizing that a topic may be material under either or both perspectives. Under this integrated approach, financial materiality and impact materiality are assessed separately but reported together to reflect a complete picture of an entity's sustainability performance and resilience.

The four-step process to determine material topics under an impact materiality perspective, as set out in [GRI 3: Material Topics 2021](#), is as follows:

I. Understand the organization's context

To gather critical information for identifying actual and potential impacts, develop a high-level overview of the organization's activities and business relationships within the relevant sustainability context, and identify key stakeholders. The GRI Sector Standards, which outline the context and characteristics of each sector, can also support this step.

Example: A mining company maps its operations and supply chain to understand potential areas where environmental or social impacts may occur, noting it sources water from water-stressed areas.

II. Identify actual and potential impacts

Identify both actual and potential impacts on the economy, environment and people across the entity's activities and business relationships, considering positive and negative impacts, short-term and long-term impacts, intended and unintended impacts, and reversible and irreversible impacts.

Example: A textile manufacturer identifies actual impacts like wastewater discharge and job creation in communities, and potential impacts such as labor rights violations among subcontractors.

III. Assess the significance of the impacts

Assess the significance of impacts by considering severity, likelihood, and irremediability of consequences for people, the environment, and the economy.

Severity reflects the scale (how grave the impact is), scope (how widespread the impact is), and irremediability of the impact (the extent to which the impact can be reversed or mitigated); likelihood considers the probability of occurrence. This assessment may combine quantitative data (e.g., emissions, resource use, costs, number of affected stakeholders) and qualitative insights (e.g., stakeholder concerns, reputational risks).

Example: A financial institution assesses data privacy breaches as highly significant due to their high severity (potential harm to customers), high likelihood given increasing cyber threats, and low irremediability once personal data is compromised, alongside significant reputational and regulatory risks.

Figure 8. Double Materiality Matrix²⁹

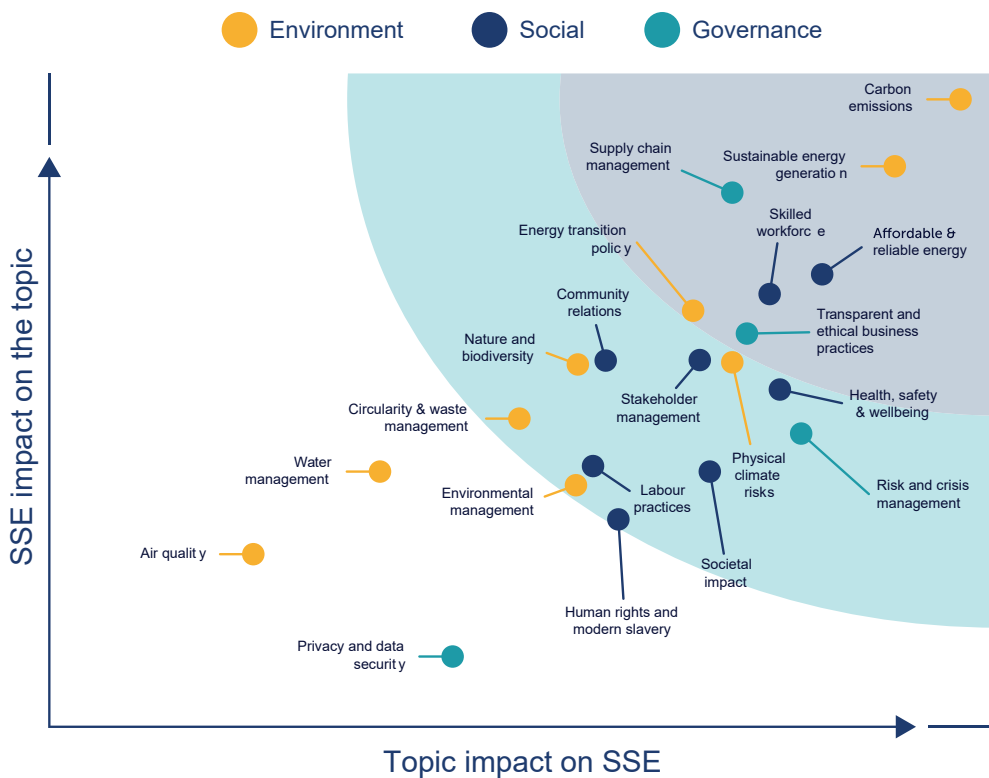


Figure 8 illustrates the relative significance of sustainability topics based on two dimensions. The vertical axis (“SSE impact on the topic”) reflects the extent to which the organization’s operations impact economy, society and the environment (impact materiality). The horizontal axis (“Topic impact on SSE”) shows the degree to which each sustainability issue affects the organization’s financial performance and long-term value creation (financial materiality).

²⁹ SSE plc Sustainability Report 2025. Available at: [sse-sustainability-report-2025.pdf](#)

IV. Prioritize the most significant impacts for reporting

Rank and prioritize the impacts that are **most significant** for reporting. An organization can validate its list of material topics with potential information users and experts.

Example: After evaluating multiple impacts based on their significance and stakeholder input, a bank prioritizes climate-related lending, data privacy, and financial inclusion as its top three material issues for reporting.

To see how both financial and impact materiality perspectives work together in practice see [Illustrative Sustainability Report](#) based on the GRI Standards and IFRS Sustainability Disclosure Standards.

Outcome

A list of the most material topics that will inform disclosures under IFRS S1 and S2, and support consistency with GRI or ESRS where applicable.

Example:

As part of its Double Materiality Assessment, Nestlé³⁰ conducted a structured evaluation of both impact and financial materiality. The company assessed a broad set of identified impacts and risks across its operations and value chain, applying defined criteria to determine their significance. Impacts were evaluated based on scale, severity, and likelihood in relation to society and the environment. In parallel, Nestlé assessed financial materiality by identifying sustainability-related risks and opportunities that could influence the company's financial performance. This systematic, criteria-based approach enabled the company to prioritize material topics and align its sustainability disclosures with both impact considerations and financial relevance.

Note that the identification, assessment, and prioritization of sustainability-related risks and opportunities carried out in this step will later be reported under IFRS S1/S2, within the *Risk Management* component, which also requires disclosure on their monitoring. For further details, see [Step 3](#).

³⁰ Nestlé, non-financial statement. Available at: [Non-Financial Statement 2024](#)

Step 3: Translate Material Issues into Disclosures

Objective

To translate the entity's material sustainability-related risks and opportunities identified in [Step 2](#) into measurable, decision-useful disclosures and performance indicators.

Determine what to disclose

Disclosures against IFRS Sustainability Disclosure Standards should follow the four core content areas – Governance, Strategy, Risk Management, and Metrics & Targets.



Governance

Reporting entities are required to disclose the highest governance body's oversight of sustainability-related risks and opportunities, the management's role, as well as processes, controls and procedures the entity uses to monitor and manage sustainability-related risks and opportunities. Refer to Governance section of IFRS S1 and S2 for a complete list of disclosure requirements.

Guiding Questions

- Who is responsible (a board, committee or individual charged with governance) for overseeing sustainability-related risks and opportunities, and how are their responsibilities defined?
- Do they have the skills and processes to monitor and manage these risks and opportunities effectively?
- How are they informed about sustainability risks and opportunities, and how often?
- How are sustainability risks and opportunities considered in strategy, major decisions, target-setting, and performance monitoring?
- Which management-level position or committee is responsible for sustainability oversight, and how are their responsibilities defined?
- How are controls and procedures used to monitor sustainability risks and opportunities, and how are they integrated with other internal functions?

Examples

- *IFRS S1: "The Risk Committee reviews ESG risks quarterly, while the Sustainability Committee sets strategic ESG targets and monitors progress against them."*
- *IFRS S2: "Climate considerations are embedded in strategic planning. All investment proposals >USD10m must include a climate risk assessment."*



Strategy

Reporting entities are required to disclose how sustainability-related risks and opportunities affect the organization's business model, strategy, and financial planning over the short, medium, and long term. Refer to Strategy section of IFRS S1 and S2 for a complete list of disclosure requirements.

Guiding Questions:

- What are current and anticipated³¹ financial effects of sustainability-related risks and opportunities?
- How have these risks and opportunities influenced strategic objectives, planning, and resource allocation?
- How are trade-offs between sustainability objectives and other business priorities evaluated?
- How are sustainability considerations integrated into the overall strategy to ensure resilience over short-, medium-, and long-term horizons?

Examples:

- *IFRS S1: "We are redesigning procurement policies to prioritize suppliers with strong ESG credentials. By 2026, 80% of raw materials will be sourced from certified sustainable providers."*
- *IFRS S2: "Our long-term strategy is aligned with net-zero by 2030. We are phasing out coal-fired energy procurement by 2030, shifting 60% of supply contracts to renewables. This transition is embedded in our 5-year strategy, supported by scenario analysis on energy market trends."*

Scenario Analysis for Climate Resilience (IFRS S2)

The entity should use the scenario analysis to assess how climate-related risks and opportunities could impact the business model, strategy, and financial performance under different plausible scenarios.

The approach to be followed entails the following:

- Select plausible scenarios (e.g., 1.5 °C, 2 °C pathways).
- Identify key variables such as transition variables (carbon pricing, regulation, technology, demand for fossil fuels vs. renewables) and physical variables (frequency/severity of extreme weather, sea-level rise, temperature changes).
- Assess impacts by mapping climate variables onto financial drivers and evaluate how the business model performs under each scenario.

Scenario analysis under IFRS S2 is a structured way to stress test strategy against multiple climate futures, focusing on financial impacts, resilience, and transparency for investors.

³¹ For more guidance refer to "Disclosing information about anticipated financial effects applying ISSB standards" available at: <https://www.ifrs.org/content/dam/ifrs/supporting-implementation/issb-standards/disclosing-information-anticipated-financial-effects.pdf>



Risk Management

Reporting entities are required to disclose how the organization identifies, assesses, and manages sustainability-related risks, and how these processes are integrated into overall enterprise risk management (ERM). Refer to Risk Management section of IFRS S1 and S2 for a complete list of disclosure requirements.

Guiding Questions:

- How are sustainability and climate-related risks identified and assessed?
- What processes, controls, and procedures are in place to manage these risks, and how are responsibilities assigned?
- How are sustainability-related risks integrated into overall risk management and used to inform strategic and operational decisions?

Examples

- *IFRS S1: “Product safety risks are managed via a three-layered control system: design review, third-party certification, and customer feedback loop.”*
- *IFRS S2: “We run annual stress tests to evaluate the impact of potential carbon tax increases up to USD100/tCO₂e. This informs capital investment decisions in our manufacturing assets.”*

Avoid unnecessary duplication if IFRS Sustainability Disclosure Standards require the disclosure of common items of information. For example, entities that oversee sustainability-related risks and opportunities in an integrated manner can streamline reporting by presenting a single, comprehensive disclosure on risk management rather than multiple, risk-specific disclosures.



Metrics and targets

Reporting entities are required to disclose metrics and targets used to measure, monitor, and manage sustainability-related risks and opportunities that could reasonably be expected to affect its enterprise value. Refer to Metrics and Targets section of IFRS S1 and S2 for a complete list of disclosure requirements.

These disclosures help investors and other users evaluate:

- How the entity tracks performance against its sustainability-related objectives
- The effectiveness of its risk-management and strategic responses
- Progress toward meeting short-, medium-, and long-term goals.

Metrics may be quantitative or qualitative and must be consistent, comparable, and verifiable. Metrics should:

- Reflect the most material sustainability topics to the entity's business model and value chain.
- Be consistent with recognized frameworks or industry benchmarks (e.g., SASB, GRI, ESRS).
- Demonstrate how sustainability performance connects to financial outcomes or strategic resilience.

Targets should be SMART (specific, measurable, achievable, relevant, time-bound) and accompanied by contextual information, such as:

- The baseline period and measurement units;
- Time horizons (short-, medium-, long-term); and
- Methodology and oversight processes, external alignment (e.g., SBTi, Net Zero by 2050 for climate-related targets), external assurance (if any).

Guiding Questions:

- What key metrics are used to assess performance in managing sustainability-related risks and opportunities, and how are they linked to strategy?
- What specific sustainability targets have been set, and over what time horizons?
- How is progress toward these targets monitored, and how are metrics used to inform decision-making and, if applicable, performance incentives?

To understand an entity's performance in relation to its material sustainability-related risks and opportunities an entity is required to disclose:

- Metrics that are used to measure and monitor that sustainability-related risk or opportunity and its performance in relation to that sustainability-related risk or opportunity, including progress towards any targets the entity has set, and any targets it is required to meet by law or regulation.

- Metrics required by an applicable topical IFRS sustainability disclosure standard (e.g. apply IFRS S2 for climate-related risks and opportunities).
- In the absence of a topical IFRS Sustainability Disclosure Standard that specifically applies to a sustainability-related risk or opportunity (e.g. related to human capital, biodiversity):
 - an entity shall refer to and consider the applicability of the industry-based metrics associated with the disclosure topics included in the SASB Standards.
 - an entity may refer to and consider the applicability of the CDSB Framework Application Guidance, GRI and ESRS, as well as Other investor-focused frameworks and industry practices.

IFRS S1 example disclosure

Metric Category / Topic	Example Metric	Example Target
Human Capital	Workplace safety incident rates	LTIFR < 0.2 by 2028
Resource Efficiency	Waste generation	Reduce total waste-to-landfill by 30% by 2028
Ethics and compliance	Number of employees trained on anti-corruption policy	100% employees trained annually on anti-corruption policy
Innovation / product mix	Share of revenue derived from sustainable or socially responsible products and services.	25% of total revenue by 2028

IFRS S2 example disclosure

Metric Category / Topic	Example Metric	Example Target
GHG emissions	Scope 1, 2 and (where material) Scope 3 emissions with methodology and base year	Net-zero GHG emissions by 2050 with interim –50% by 2030
Energy profile	Share of renewable energy	100% renewable electricity by 2028
Carbon intensity	tCO ₂ e per unit of revenue	Reduce tCO ₂ e per unit of revenue 35% by 2030
Capital allocation	Share of Capex/Opex directed to low-carbon or transition activities	Allocate 70% of new Capex to low-carbon investments by 2026

Transition reliefs and proportionality mechanisms

Transition reliefs exist to give preparers time to build systems, processes, and data capabilities before fully implementing the Standards:

1. *Climate First Reporting* – In the first annual reporting period that an entity applies IFRS S1 and IFRS S2, the entity may report only climate related disclosures (in accordance with IFRS S2) instead of the full sustainability related information required by IFRS S1.
2. *No Prior Period Comparative for First Year* – An entity is not required to provide comparative information (i.e., prior period figures) for any sustainability related financial disclosures in the first annual reporting period in which it applies IFRS S1 or IFRS S2.
3. *Timing of Reporting* – In its first year of application, an entity may publish sustainability related disclosures after it publishes its financial statements, rather than at the same time. The Standard specifies permissible timing (e.g., with interim reports).
4. *Scope 3 Emissions Relief* – In the first annual reporting period under IFRS S2:
 - An entity is not required to disclose Scope 3 greenhouse gas (GHG) emissions.
 - Also, if the entity was previously using a measurement method other than the GHG Protocol, it may continue to use that method for this first reporting period.

Proportionality mechanisms address challenges related to resource constraints, data and specialist availability:

- Reasonable and supportable information that is available at the reporting date without undue costs or effort
- Commensurate with skills, capabilities, and resources that are available to the company.

Examples of Applying Proportionality Mechanisms under IFRS S1/S2

Disclosure Area	Example
Identification of risks and opportunities	The company uses internal risk registers and board meeting minutes to identify material sustainability risks and opportunities without commissioning a new external study.
Anticipated financial effects	If estimating the exact quantitative financial effect of a climate risk (e.g., lost earnings from a weather event) requires specialized external modelling that isn't reasonably obtainable, a company can provide qualitative discussion of the risk and its potential implications instead of exact figures, explaining why quantitative data isn't provided.
Determination of the scope of value chain	The company uses all reasonable and supportable information available at the reporting date without undue cost or effort to define the value chain scope for reporting. It <i>does not</i> undertake exhaustive data collection from every supplier it has ever worked with, especially smaller or informal vendors where obtaining direct data would be prohibitively costly and timeconsuming.
Climate-related scenario analysis	The company uses the reasonable and supportable information available at the reporting date without undue cost or effort to carry out climate-related scenario analysis. It starts with publicly available, authoritative climate scenarios (e.g., from global climate research bodies) and combines them with qualitative narratives about how climate change could affect its supply chain and coastal facilities. It does not yet perform full quantitative modelling because that would require data and resources it does not yet have.
Measurement of Scope 3 GHG emissions	When full direct data is not available, a company estimating Scope 3 GHG emissions can rely on reasonable and supportable information available at the reporting date without undue cost or effort, such as previous period data from entities in its value chain to estimate current emissions, latest activity based industry averages, and emission factors available to the company.
Calculation of metrics in particular cross-industry metric categories	When calculating metrics in certain cross-industry categories, the company uses only reasonable, supportable, and available information at the reporting date without undue cost or effort.

Set up internal processes for measurement, verification, and reporting

After determining the material sustainability-related information to be reported, and the applicable standard or framework, a process should be established for collecting and assessing the data requirements for each sustainability-related risk and opportunity, with clear procedures and responsibilities. This process should be documented and standardized, with clear data owners, defined calculation methodologies, and review and approval controls to ensure the integrity of the information prior to publication. The specific design of these processes will vary by entity, reflecting its facts and circumstances (including its business model and value chain, size and complexity, existing systems and controls).

Data owners and internal controls:

- Identify data owners for each dataset and a central reporting owner responsible for consolidation.
- Assign responsibility for each dataset to a specific function that generates or controls the data.

Examples:

Finance → energy use, tax transparency.

Human Resources → workforce and diversity metrics.

Operations → water use, waste.

Procurement → supply chain data.

Establish internal controls comparable to financial reporting. Key practices include:

- Documented data definitions, boundaries, and calculation methodologies (including key assumptions).
- Validation checks (automated or manual) including variance analysis vs. prior period and operational drivers.
- Segregation of duties (data collection vs. review).
- Periodic internal audits.

Example:

All emissions data undergo a three-step review

(Operations → Finance → Internal Audit) before external assurance.

Optional extension: apply additional disclosures

Beyond the core IFRS S1 and IFRS S2 disclosures, entities may need to include **additional disclosures** to:

- Comply with jurisdictional or regulatory requirements.
- Meet the information needs of the broader set of stakeholders.
- Align with industry-specific or voluntary disclosures reflecting established or emerging industry practices.

Jurisdictional Requirements

Where an entity is subject to jurisdictional sustainability disclosure requirements – such as the ESRS under the CSRD – it should integrate these obligations alongside the IFRS S1/S2 baseline.

To ensure clarity and comparability:

- **Add jurisdiction-specific disclosures** addressing regulatory requirements not already covered by IFRS S1/S2.
- **Prepare a mapping or alignment table** showing how jurisdictional disclosures correspond to equivalent requirements under IFRS Standards or other frameworks such as GRI.

Broader stakeholder requirements

Where stakeholders expect coverage of impact materiality, entities can complement their IFRS S1/S2 disclosures with relevant GRI Standards (including Universal, Topic, and Sector Standards).

A GRI Content Index should be presented to clearly indicate which GRI disclosures are applied and where they are located within the report.

Examples of additional disclosures under GRI that would supplement IFRS reporting

Environmental – Materials & Circularity (GRI 301 & 306): Material use (renewable vs. non-renewable); Waste generation, treatment, and circular economic efforts.

Social – Diversity & Inclusion (GRI 405): Gender, age, minority representation across governance bodies and staff.

Governance – Anti-Corruption (GRI-205): Number of corruption incidents and corrective actions taken; Employee training on ethics and anti-bribery.

When providing these additional disclosures, entities must ensure that the information does not conflict with or obscure sustainability-related financial information disclosed under IFRS S1 and S2.

Applying the Building Blocks Approach: a Practical Example

A manufacturing company is preparing its sustainability report using the building blocks approach to ensure interoperability and avoid duplication.

1. Baseline Alignment (IFRS S1/S2):

- The company identifies climate-related risks and opportunities that could affect its financial performance, such as energy costs and carbon pricing.
- It discloses information in line with IFRS S2, including metrics on Scope 1, 2, and 3 GHG emissions, climate risk governance, and scenario analysis.
- These disclosures address financial materiality – focusing on how climate issues impact enterprise value and investor decision-making.

2. Expanding to Broader Impacts (GRI Standards):

- To capture the company's wider environmental and social impacts, it adds disclosures from GRI 305: Emissions and GRI 302: Energy, which address impact materiality (how the company affects the environment and society).
- For instance, the company reports on total GHG emissions by type and intensity, energy consumption by source, and initiatives to reduce emissions that go beyond what is required by IFRS S2.

3. Avoiding Duplication

- Since both IFRS S2 and GRI 305 include GHG metrics, the company maps overlapping metrics – using the same calculation methodologies and data sources for consistency.
- This ensures that emissions data disclosed under GRI is not repeated but cross-referenced to the relevant IFRS section in the report.

A mapping table, or disclosure index (as shown below), should be prepared and appended at the end of the report.

Sample Mapping Table

Disclosure Topic	ISSB / IFRS S1–S2	GRI	Where Disclosed in Report
GHG Emissions	IFRS S2: Scope 1, 2, 3	GRI 305–1, 305–2, 305–3	Sustainability Report, page xx
GHG Intensity	IFRS S2	GRI 305–4	Emissions Table, page xx

For detailed interoperability guidance on ESRS and ISSB Standards and GRI and ISSB Standards, see:

- [ISSB–ESRS Interoperability Guidance \(IFRS, 2024\)](#)
- [IFRS–GRI Interoperability for GHG Emissions \(IFRS, 2024\)](#)
- [Interoperability considerations for GHG emissions when applying GRI Standards and ISSB Standards](#)
- [GRI 102 and IFRS S2: Statement on reporting on both standards and equivalence for IFRS S2 on GHG Emissions Disclosures: Organizations that report using both GRI 102 and IFRS S2 can use the equivalent IFRS S2 disclosures for Scope 1, Scope 2, and Scope 3 GHG emissions to meet the corresponding GRI 102 requirements.](#)

Outcome

A structured sustainability-reporting framework with defined performance indicators and targets, and integrated data management systems ensuring credibility and traceability of ESG information.

Step 4: Communicate Effectively

Objective

To effectively disclose sustainability-related information in a transparent, consistent, and decision-useful manner that meets the needs of stakeholders.

Presentation requirements under IFRS sustainability disclosure standards

When communicating sustainability-related information, entities must meet the qualitative and structural requirements of IFRS S1. Specifically, disclosures should:

- **Be decision-useful**, enabling investors and stakeholders to make informed economic decisions.
- **Provide a fair representation**, forming a complete, balanced, and accurate set of sustainability-related financial disclosures.
- **Include material information** covering sustainability-related risks and opportunities that could reasonably be expected to affect the company's cash flow, cost of and access to capital.
- **Depict the same reporting entity** as in the related financial statements to ensure consistency and comparability.
- **Demonstrate connectivity**, showing clear linkages between sustainability information, financial data, and other disclosures to provide an integrated view of performance.

When disclosing material sustainability information, reporting entities should ensure clarity, accessibility, and compliance with reporting requirements.

Reporting principles

The IFRS Sustainability Disclosure Standards (IFRS S1 and S2) are built on reporting principles that guide how sustainability and climate information should be disclosed. These principles are designed to make disclosures decision-useful, consistent, and comparable for investors and other users. The basic principles of IFRS sustainability disclosure standards are outlined below:

- I. **Fair Presentation:** Disclosures must faithfully represent relevant sustainability-related risks and opportunities, providing complete, neutral and accurate information.

Example: Where emissions rise in earlier periods and decline in subsequent periods, the entity discloses both trends rather than reporting only improvements.

II. **Materiality:** An entity shall disclose information about sustainability-related risks and opportunities that could reasonably be expected to affect the entity's enterprise value.

Example: The entity identifies water scarcity as a material sustainability-related risk due to its potential impact on production capacity and costs, and therefore discloses how this risk affects operations, capital expenditure planning, and long-term cash flows.

III. **Connected Information:** Disclosures shall be presented in a connected manner, enabling users to understand the relationships between governance, strategy, risk management, metrics, and related financial information.

Example: Where the Board oversees climate-related risks, the entity explains how this oversight influences risk management practices and the setting and monitoring of related targets.

IV. **Consistency and Comparability:** Information shall be prepared using consistent units, methodologies, and boundaries over time to enable meaningful comparison across reporting periods and between entities. Any changes to methodologies or metrics shall be explained, with comparative information restated, where practicable.

Example: Emissions are reported consistently using CO₂e across Scope 1–3. When changing from location-based to market-based Scope 2 reporting, both measures are disclosed for one year to support comparability.

V. **Verifiability:** Disclosures shall be supported by evidence and documented processes to enable independent verification.

Example: The entity discloses the methodologies and assumptions used to calculate emissions (for example, application of GHG Protocol emission factors) and, where applicable, obtains independent external assurance to support the reliability of the information.

VI. **Timeliness:** Information shall be disclosed in a timely manner to be useful for decision-making.

Example: The entity publishes its sustainability-related financial disclosures alongside the annual financial statements each year, ensuring that users receive up-to-date information on climate risks and progress toward targets.

VII. Understandability: Disclosures shall be clear, concise, and presented in a way that enables users to understand the sustainability-related risks and opportunities and their effects on enterprise value. Obscuring material information with immaterial information or by aggregating dissimilar material items reduce understandability of disclosures.

Example: The entity presents sustainability metrics in clear tables and charts, explains key terms and methodologies (e.g., Scope 1–3 emissions, water withdrawal), and avoids technical jargon to ensure that users without specialist expertise can interpret the information.

Reporting principles alignment across standards

IFRS S1/S2	GRI	ESRS
Fair Presentation (completeness, neutrality, accuracy)	Completeness, balance, accuracy	Faithful representation (completeness, neutrality, accuracy)
Materiality	Materiality	Relevance
Connected Information	Sustainability context	Connected Information
Consistency and Comparability	Comparability	Comparability
Verifiability	Verifiability	Verifiability
Timeliness	Timeliness	-
Understandability	Clarity	Understandability

Disclosure location and timing

Entities must ensure that sustainability-related financial information is properly placed within the general-purpose financial report and communicated on time.

- **Location of disclosures:** Sustainability-related financial information must be included within the same general-purpose financial report as the entity's financial statements. This may be done directly or through cross-referencing to other reports (e.g., management commentary or sustainability report) provided they are published at the same time and available to users on equal terms. Publishing a separate sustainability report later, or with different access conditions, does not satisfy IFRS S1.

Illustrative Presentation Formats

Entities may choose different report formats, but the IFRS requirement applies regardless of format: all IFRS S1/S2 disclosures must either be presented in, or cross-referenced from, the general-purpose financial report. Cross-referenced information must be available to users on the same terms and at the same time as the financial statements.

1. **Annual Report:** A traditional annual report that includes dedicated sections on sustainability, ESG or climate-related topics alongside financial statements.
2. **Standalone Sustainability Report:** A separate publication providing detailed sustainability or ESG information, often structured in line with GRI or CSRD frameworks. Only compliant if every IFRS S1/S2 disclosure is explicitly cross-referenced from the general-purpose financial report and the report is published at the same time and on the same terms.
3. **Integrated Report:** A single, combined report that presents both financial and sustainability information in a cohesive narrative.

- **Timing:** The entity's sustainability-related disclosures shall cover the same reporting period as the related financial statements, ensuring that users receive both financial and sustainability-related information concurrently. Aligning the timing ensures that users can consider both sets of information together when making economic decisions.
- **Cross-referencing:** According to the IFRS S1 standards, disclosure by cross-reference is subject to the provision that the cross-referenced information is available on the same terms and at the same time as the sustainability-related financial disclosures. The cross-reference must be clear, direct and specific; and the entity remains responsible for the completeness and accuracy of the referenced information.

Building confidence

High-quality sustainability-related financial reporting should build confidence among investors, regulators, and stakeholders by being transparent, balanced, and evidence-based.

- **Dealing with uncertainty:** Sustainability-related information often involves forward-looking assumptions, scenario analysis, and estimates under uncertain conditions. Entities should describe the methods and assumptions used, explain the degree of uncertainty, and avoid giving a false sense of precision. Entities should try to use reasonable estimates when preparing sustainability-related financial disclosures.
- **Commercial sensitivity:** Some sustainability-related information may be commercially sensitive. IFRS S1 acknowledges that entities may need to balance transparency with legitimate confidentiality concerns. In such a case, commercially sensitive information may be withheld subject to the conditions that the information is not already publicly available, and disclosing such information could reasonably be expected to cause serious prejudice to the company's ability to realize economic benefits.
- **Statement of compliance:** Including a statement of compliance confirming that disclosures have been prepared in accordance with IFRS S1 and S2. This adds credibility to the report.
- **Assurance options:** IFRS Sustainability Standards do not mandate assurance, but entities may voluntarily obtain limited or reasonable assurance to enhance credibility or to meet jurisdictional requirements (e.g., the EU CSRD). Any assurance obtained should clearly state its scope and level.

Together, these elements ensure that sustainability-related financial disclosures are not only compliant but also credible, transparent, and trusted by users.

Outcome

A transparent, credible, and decision-useful sustainability report aligned with global standards and stakeholder expectations.

Conclusion

It is vital for AIX-listed companies to be equipped to navigate the rapidly evolving landscape of sustainability and ESG requirements. With global ESG assets continuing to expand and regulatory frameworks imposing increasingly stringent standards, the need for comprehensive, transparent, and actionable ESG reporting strategies has never been greater.

This Guidance provides issuers with a structured approach to sustainability reporting. It explains key concepts, including the principle of materiality, and offers practical steps for implementing robust reporting processes. These steps include setting reporting foundations, identifying material issues, translating them into disclosures, and communicating the information effectively.

Adopting the AIX Sustainability Reporting Guidance enables issuers not only to meet international investors and regulatory expectations but also to leverage ESG as a driver of competitiveness, sustainable financing, and trust. A structured approach aligned with global standards demonstrates transparency and accountability, strengthens investor confidence, and supports the integration of ESG into companies' long-term strategies, enhancing resilience and competitiveness in the context of a low-carbon transition.



Annex 1: Sustainability Reporting Readiness – Checklist

Step 1. Set Reporting Foundations

Task	Not Started ■	In Progress ■	Complete ■
Board-level oversight established			
Reporting purpose and audience defined			
Reporting boundary aligned with the scope			
Reporting criteria defined			
Roles & responsibilities assigned			

Step 2. Determine Material Issues

Task	Not Started ■	In Progress ■	Complete ■
Identification of material issues			
Financial materiality assessment completed			
Material issues ranked and prioritized			
Materiality assessment validated by stakeholders			
Double materiality assessment completed (optional)			

Step 3. Translate Material Issues into Disclosures

Task	Not Started ■	In Progress ■	Complete ■
Frameworks/standards selected			
Application of IFRS standards and the 4 pillars			
Climate scenario analysis completed (S2)			
Metrics and targets defined			
Proportionality mechanisms and transition reliefs applied (where relevant)			
Data owners identified			
Internal processes and controls for measurement, verification, and reporting established			
Application of additional disclosures, industry standards, jurisdictional requirements (optional)			

Step 4. Communicate effectively

Task	Not Started ■	In Progress ■	Complete ■
Information aligned with Reporting Principles			
Sustainability disclosures published alongside financial reporting			
Location, timing and cross-referencing of disclosures followed			
Key assumptions, uncertainties, and sensitive information disclosed appropriately			
Comparative information provided			
Statement of compliance with chosen framework included			
External assurance completed (if applicable)			

Annex 2: Sustainability Disclosure Metrics

Following is a list of recommended disclosure metrics that companies can use to start communicating on the ESG issues. The metrics have been divided into four categories: General information, Environmental disclosures, Social disclosures and Governance disclosures. Each category contains recommended disclosure metrics (both qualitative and quantitative) that have been marked either as minimum disclosures (relevant to all companies) or additional disclosures (that might not be relevant to all companies)

The selection of recommended disclosure metrics has been informed mainly using metrics in the existing sustainability reports of over 50 companies in Kazakhstan. It may be noted that these guidelines do not provide an exhaustive list of indicators. Rather the objective is to provide a minimum set of selected disclosure metrics to assist entities meet the reporting requirements.

Environmental Disclosures

Environmental metrics cover issues that arise from or impact the natural environment.

Climate change

Climate change has emerged as the biggest environmental challenge posing significant risks and opportunities for businesses and investors alike. Accordingly, the demand for climate-related information and metrics is expected to increase.

Recommended disclosures

Name	Unit	IFRS	Other Frameworks
Minimum disclosures (applicable to all sectors)			
Climate Change Management	Description	S2	GRI (302, 305), ESRS (E1)
GHG Emissions	Tons CO ₂ e	S2	GRI (305), ESRS (E1–6)
GHG Emissions Intensity	tCO ₂ e/ revenue	S2	GRI (305), ESRS (E1–6)
Energy Consumption and Mix	MWh	S2	GRI (302), ESRS (E1–5)

Climate Change Management

Companies are advised to use IFRS S2 Climate-related Disclosures to inform their disclosures about climate governance, strategy, risk management, targets and metrics.

GHG Emissions

- GHG emissions are mandatory metrics under IFRS S2.
- Entities must disclose absolute Scope 1–3 emissions and at least one intensity metric, following the GHG Protocol.

Energy Consumption and Mix

Entities must disclose total energy consumed in the reporting period and the breakdown of energy sources:

- Renewable (solar, wind, hydro, biomass, geothermal)
- Non-renewable (coal, oil, natural gas, nuclear)

Other environmental issues

Other environmental disclosures may relate to topics such as the use of natural resources, impacts on biodiversity as well as waste and pollution.

Recommended disclosures

Name	Unit	IFRS	Other Frameworks
Minimum disclosures (applicable to all sectors)			
Water Consumption	m ³	S1, S2	GRI (303–5), ESRS (E3–4)
Water Management	Description	S1, S2	GRI (303–2), ESRS(E3–2)
Air Pollution	Description	-	GRI (305–7), ESRS (E2)
Biodiversity Impacts	Description	-	GRI (304), ESRS (E4)
Waste Management	Description	S1	GRI (306), ESRS (E5)

Water Consumption and Management

Water is reportable if it poses a financially material risk or opportunity. Entities must disclose governance of water risk, and risk management processes (water scarcity, quality, regulation).

Waste Management

Entities must disclose policies & governance for waste and circular economy, and total amount of waste (hazardous vs. non-hazardous) generated (in tons).

Air Pollution

IFRS does not explicitly require disclosure of air pollutants unless they are material to enterprise value (e.g., regulatory compliance costs, reputational risks, fines) and are significant for the company's industry (e.g., power, mining, transport, cement).

Issuers may disclose air pollutants as “additional environmental metrics” if they influence financial performance, risk management, or strategy.

Biodiversity Impacts

Biodiversity is material if operations depend on ecosystems (e.g., forestry, fisheries, agriculture).

IFRS does not prescribe specific biodiversity metrics, but issuers should align with industry standards (SASB) and use cross-references (GRI, CSRD). Entities must disclose governance and strategy for biodiversity-related risks, risk management processes, and metrics (e.g., hectares of habitat restored, % certified sustainable sourcing).

Social Disclosures

Social metrics relate to the rights, well-being and interests of people and communities.

Working conditions

Working conditions are a central part of social disclosures in ESG reporting and relate to how an organization treats its employees and workers in its value chain, ensuring fair, safe, and equitable employment.

Recommended disclosures

Name	Unit	IFRS	Other Frameworks
Minimum disclosures (applicable to all sectors)			
Diversity Policy	Policy	S1	GRI (405), ESRS (S1–1)
Gender Pay Gap Ratio	Percentage	S1	GRI (405–2), ESRS (S1–16)
Employee Turnover	Percentage	S1	GRI (401–1), ESRS (S1–6)
Workplace Health & Safety	Description	S1	GRI (403), ESRS (S1–14)

Diversity policy

IFRS S1 requires disclosure of diversity policy if it is financially material. Entities should disclose if its diversity policy includes commitment to eliminate discrimination and promote equal opportunities.

Gender pay gap ratio

Entities could disclose the gender pay gap ratio, which reflects the average difference in earnings between men and women. While IFRS S1 does not mandate this metric, it may be material in reporting workforce-related sustainability risks and opportunities.

Employee turnover

IFRS S1 requires disclosure of employee turnover rate, should it be financially material. Entities should describe mitigating factors in this respect such as governance oversight of workforce stability and strategy for talent retention.

Workplace health & safety (H&S)

Workplace health and safety can have financial consequences and may be material. If material, entities should disclose whether the board or relevant committee oversees health and safety, and how it has been integrated into corporate culture and risk management.

Human rights

Beyond ethical concerns, companies that do not evaluate and manage their human rights impacts may face reputational and regulatory risks.

Recommended disclosures

Name	Unit	IFRS	Other Frameworks
Minimum disclosures (applicable to all sectors)			
Human Rights Policy	Policy	S1	GRI (2–23/24 & 410), ESRS (S1-S4)
Human Rights Due Diligence	Description	S1	GRI (2–23/24 & 410), ESRS (S1-S4)

Human rights policy

Human rights can be financially material due to risks stemming from legal, regulatory, reputational, and operational issues. Entities should disclose governance of human rights (board oversight, policies), as well as strategy and risk assessment, including salient risks in operations and the value chain.

Human rights due diligence

Entities should disclose whether they conduct human rights, labor rights or social rights due diligence across the value chain to assess risk exposure to issues such as child labor and forced labor. This could have financially material consequences; hence it is imperative to disclose if human rights risks are integrated into risk management.

Governance Disclosures

Governance metrics cover issues pertaining to corporate governance and business ethics standards.

Corporate governance

Corporate governance is at the heart of both financial and sustainability reporting. Under IFRS S1/S2, governance is one of the four disclosure pillars.

Recommended disclosures

Name	Unit	IFRS	Other Frameworks
Minimum disclosures (applicable to all sectors)			
Board Composition	Description	S1, S2	GRI (2–9), ESRS 2 (GOV-1)
Board Independence	Percentage	S1, S2	GRI (2–9), ESRS 2 (GOV-1)
Board Diversity	Percentage	S1, S2	GRI (405), ESRS 2 (GOV-1)

Board composition

Under IFRS S1 and S2, entities must disclose:

- Which board committee(s) oversee sustainability- and climate-related risks/opportunities.
- How the board is informed about these issues.
- Expertise and skills of board members relevant to sustainability

Board independence

Independence is important in demonstrating credible, unbiased oversight of ESG risks. As per IFRS S1/S2, entities must report which board committee(s) oversee sustainability/climate risks. Beyond this requirement, disclosing the percentage of independent board members can further demonstrate credible and unbiased oversight.

Board diversity

Entities should describe skills, experience, and diversity of the board when relevant to ESG oversight, and in particular, percentage of female board members should be reported.

Business ethics & data security

Business ethics is a cornerstone of governance disclosures, covering integrity, anti-corruption and fair business practices. Data security is about protecting personal data from any unauthorized third party access.

Recommended disclosures

Name	Unit	IFRS	Other Frameworks
Minimum disclosures (applicable to all sectors)			
Code of Ethics	Policy	S1	GRI (2–23, 2–24, 2–27), ESRS 2 (GOV-2, GOV-4)
Anti-Corruption Policy	Policy	S1	GRI (205), ESRS G1
Whistleblower Policy	Description	S1	GRI (2–26, 205), ESRS (S1–3, S2–3, S3–3, S4–3, G1–1)
Data Security Policy	Policy	S1	GRI (418), ESRS (S4–3, S4–4)

Code of ethics

Entities should disclose if they have adopted a code of ethics and whether it is accessible internally and externally.

Anti-corruption policy

Entities should disclose if they have an anti-corruption policy that extends to suppliers and business partners.

Whistleblower policy

Entities should report whether they have a whistle-blower procedure in place, methods for reporting a violation or concern, and process for handling the report.

Data security policy

Entities should report whether they have a cyber and data security policy in place. This policy should ideally contain details about the scope of data protection, cyber and data security risk management arrangements, etc.

Sector-specific metrics

The following tables present a set of suggested metrics for some of the main sectors listed on AIX. These tables have been informed primarily by the SASB sector standards.

Transportation

Governance	Social	Environment
Board (Composition, Independence, Diversity)	Diversity	GHG emissions
Code of Ethics	Gender Pay Gap	Water management
Anti-Corruption	Employee Turnover	Biodiversity and Land use
Data Security	Workplace Health & Safety	Air/Water pollution
	Human rights	Energy mix

Oil and Gas

Governance	Social	Environment
Board (Composition, Independence, Diversity) Code of Ethics Anti-Corruption Data Security	Diversity Gender Pay Gap Employee Turnover Workplace Health & Safety Human rights Community relations	GHG emissions Water management Biodiversity and Land use Air pollution

Telecommunications

Governance	Social	Environment
Board (Composition, Independence, Diversity) Code of Ethics Anti-Corruption Data Security	Diversity Gender Pay Gap Employee Turnover Workplace Health & Safety Human rights	GHG emissions Energy mix Biodiversity and land use Atmospheric Pollution Solid waste

Mining

Governance	Social	Environment
Board (Composition, Independence, Diversity) Code of Ethics Anti-Corruption Data Security	Diversity Gender Pay Gap Employee Turnover Workplace Health & Safety Human rights Community relations	GHG emissions Energy mix Biodiversity and land use Atmospheric Pollution Solid waste Water management

Annex 3: Reporting Template

Reporting companies could use this template

Metric ID	Metric name	Disclosure and explanatory notes	Disclosure reference
Environmental disclosures			
Climate change			
E-1	Climate change management		
E-2	GHG emissions	Scope 1 emissions: Scope 2 emissions: Scope 3 emissions:	
E-3	GHG emissions intensity	GHG emissions intensity:	
E-4	Energy consumption and mix	Total amount of energy consumed within the organization:	
Other Environmental Issues			
E-5	Water consumption		
E-6	Water management		
E-7	Air Pollution		
E-8	Biodiversity impacts		
E-9	Waste management		

Metric ID	Metric name	Disclosure and explanatory notes	Disclosure reference
Social disclosures			
Working conditions			
S-1	Diversity policy	Has the company adopted a diversity policy: YES/NO	Link to the policy
S-2	Gender pay gap ratio	Gender pay gap ratio:	
S-3	Employee turnover	Employee turnover:	
S-4	Workplace health and safety		
Human rights			
S-5	Human rights policy	Has the company adopted a human rights policy: YES/NO Does the policy extend to suppliers and business partners: YES/NO	Link to the policy
S-6	Human rights due diligence		
Governance disclosures			
Corporate governance			
G-1	Board composition		
G-2	Board independence	Percentage of independent board members in the management board: Percentage of independent board members in the supervisory board:	
G-3	Board diversity	Percentage of female board members in the management board Percentage of female board members in the supervisory board:	

Metric ID	Metric name	Disclosure and explanatory notes	Disclosure reference
Business ethics and Data Security			
G-4	Code of ethics	Has the company adopted code of ethics: YES/NO Does the code extend to suppliers and business partners: YES/NO	Link to the policy:
G-5	Anti-Corruption Policy	Has the company adopted anti-corruption policy: YES/NO Does the policy extend to suppliers and business partners: YES/NO	Link to the policy:
G-6	Whistleblower Procedure	Does the company have a whistle-blower procedure in place: YES/NO Is the procedure available to suppliers and third parties: YES/ NO	Link to the procedure:
G-7	Data Security Policy	Has the company adopted data security policy: YES/NO	Link to the policy

