MEMA Summary: ESG Disclosure Standards

November 2023

Executive Summary

Environmental, Social, and Government (ESG) disclosure standards have been voluntary practice for years. Organizations like the Global Reporting Initiative (GRI) and Taskforce for Climate-related Financial Disclosures (TCFD) have developed widely used standards that have been adopted by corporations around the world. The success of these standards has resulted in their use as a template as governments develop legislation and regulations that will make this voluntary practice mandatory.

This summary provides an overview of the European environmental regulations that serve as a backdrop for the EU's Corporate Sustainability Reporting Directive (CSRD). It also reviews pre-existing standards and concepts, such as materiality, that are crucial to understanding these regulatory frameworks. Next, this summary reviews and compares standards from the EU, International Sustainability Standards Board (ISSB), and the U.S. Securities and Exchange Commission (SEC). Finally, this summary reviews the recent ESG legislation from California that adopts a broader approach than the one expected from the SEC final rule.

European Regulatory Background

This section outlines the various EU environmental directives and regulations that operate in conjunction with the EU ESG reporting directive, the CSRD.

European Green Deal

The European Green Deal is a goal set by the European Commission to become climate-neutral by 2050, making Europe the first climate-neutral continent. The plan includes an ambitious new goal for 2030, with a target for 55% reduction in net greenhouse (GHG)emissions compared to 1990 levels[1]. In 1990, total GHG emissions reached 4,867 million metric tons of CO_2 equivalent ($MTCO_2e$). In 2021, emissions had reduced to 3,472 $MTCO_2e$[2].

A sustainable transportation sector is key for the EU to reach its goals. The Commission promotes the market for ZEVs and LEVs to meet its transportation targets which include a 55% reduction in new car emissions by 2030 (50% reduction by vans) and 0 emissions from new cars by 2035 from 1990 levels. This represents a challenge, as the transport sector is the only sector whose emissions

---

[1] Delivering the European Green Deal (europa.eu)
[2] EU-27: greenhouse gas emissions 1990-2021 | Statista

have increased since 1990, with road transport representing 70% of transportation emissions[3]. Starting 2026, road transport will be included in the emissions trading system, a move that will put a price on pollution and stimulate innovation.

To achieve these goals, the EU has proposed and adopted a series of directives that will work together to create a set of robust sustainability reporting standards for companies doing business within the EU.

EU Taxonomy

The EU Taxonomy is a classification system that identifies which investments are environmentally sustainable under the European Green Deal. This system creates a set of criteria that constitute sustainable economic activities, reducing the risk of green washing. It also outlines six environmental objectives, including climate change mitigation and adaptation. While this system creates no obligation for investors to choose the most sustainable option, it is expected that over time this will lead a transition towards sustainability, helping achieve climate goals.

The EU taxonomy allows for companies to share common criteria to define what actions are considered environmentally sustainable. The Taxonomy Regulation began in July 2020, and help set out the four conditions that make an action taxonomy oriented:

1. Making a substantial contribution to at least one environmental objective
2. Doing no significant harm to any other environmental objective
3. Complying with minimum social safeguards
4. Complying with technical screening criteria[4]

Companies that fall under the Corporate Sustainability Reporting Directive (CSRD) will be required to disclose information under the EU Taxonomy.

Corporate Sustainability Due Diligence (CSDD)

The CSDD is a directive adopted by the European Commission in February 2022 that aims to promote "sustainable and responsible corporate behavior and to anchor human rights and environmental considerations in companies' operations and corporate governance." The directive will force companies to evaluate and address their value chains across the globe. The final text of the legislation is expected in 2024.

In addition to reporting on human rights and environmental issues impacting their value chain, certain larger companies must align their business strategy to be conducive to the goals outlined in the Paris Agreement. Company directors will be expected to ensure their companies are implementing due diligence in business strategies and decisions.

Affected companies will fall into two categories:

---

[3] eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0851
[4] EU taxonomy for sustainable activities (europa.eu)

1. **Group 1**: EU LLCs with 500+ employees that net €150 million+ turnover worldwide.
2. **Group 2:** EU LLCs with 250+ employees in high impact sectors (textiles, mineral extraction, etc.) that net €40 million turnover worldwide. Companies in this category will have two additional years before the rules apply[5].

The CSDD will also impact non-EU companies that align with the thresholds established for Groups 1 and 2. SMEs and micro companies are not subject to the CSDD, but those indirectly impacted can see the proposal for supporting measures.

EU Regulation on Deforestation-Free Supply Chains

Another regulation in the EU nexus of sustainable legislation is the EU Regulation on deforestation-free supply chains. This will require companies to confirm that the product has not been produced on land subject to deforestation or degradation after December 31, 2020[6]. No countries or commodities are banned, but companies will need to conduct due diligence to export or sell goods like rubber on the EU market[7]. Additionally, companies will need to confirm that products follow legislation in the country of production, including human rights legislation. Compliance with these rules begins in 18 months and will apply to products from inside and outside the EU.

Pre-Existing Concepts, Frameworks, and Resources

This section reviews concepts, resources, and pre-existing framework that are key to understanding the basis of ESG disclosure regulations.

Emissions

Greenhouse gas emissions can be categorized as Scope 1, 2, and 3 emissions. Understanding the different categories of emissions is important for those tasked with preparing climate disclosure reports. Scope 1 emissions are the direct emissions from sources owned or controlled by an entity. Scope 2 emissions are the indirect emissions that result from the purchase of electricity, steam, heat, or cooling. These are included because they are a result of the entity's energy use[8]. Scope 3 emissions are the emissions resulting from assets not owned or controlled by the entity, but the entity indirectly affects in its value chain[9]. These include all the emission sources not captured by Scope 1 and 2 emissions and represent most of a reporting entity's emissions. The broad nature of Scope 3 emissions makes it difficult for organizations to include them in climate disclosure reports.

---

[5] Corporate sustainability due diligence (europa.eu)
[6] Green Deal: New law to fight global deforestation and forest degradation driven by EU production and consumption enters into force (europa.eu)
[7] Affects palm oil, cattle, soy, coffee, cocoa, timer, and rubber. Also applies to derived products, including tires.
[8] Scope 1 and Scope 2 Inventory Guidance | US EPA
[9] Scope 3 Inventory Guidance | US EPA

Global Reporting Initiative (GRI)

The GRI is an independent standards organization developed in 1997, that has become the most widely used sustainability reporting standard by businesses and organizations across the world. GRI is a voluntary initiative that encompasses economic, environmental, and social topics[10]. In 2021, GRI reorganized to better align with other frameworks, emphasizing due diligence and materiality. It is important to note that GRI focuses on impact materiality, differing from ISSB and CSRD. This means that GRI focuses on the ESG topics where a company can have the most significant impacts.

Double Materiality

The concept of materiality is a key accounting concept that information is material and should be disclosed if "a reasonable person would consider it important." It is also widely accepted that that the climate-related impacts on a company are material and require disclosure. Double materiality furthers this: it is both the climate-related impacts on a company *and* the impacts of a company on the climate that can be material and require disclosure[11].

As the most widely used ESG standard, GRI proposed in 2020 to update its definition of materiality to be inclusive of double materiality. This concept is also a CSRD requirement for reporting entities in the EU. The required double materiality assessment will help companies determine which sustainability matters are most material to both companies and stakeholders. For each sustainability matter that the company determines to be material the company must disclose metrics and targets, as well as action plans for how to achieve these goals.

This concept has not been adopted by the SEC or ISSB. It is important to note that both organizations rely on financial materiality standards to determine what is material and therefore should be disclosed. However, the SEC's interpretation of materiality does leave some room for double materiality. The SEC has long held the "reasonable investor[12]" test to determine what must be disclosed- if a reasonable investor would find the information material, then it should be disclosed. As sustainability becomes more of a core value for average investors, it is reasonable to expect that this information will become material in the U.S. as well.

Greenhouse Gas Protocol (GHG Protocol)

The GHG Protocol is the most widely used greenhouse gas accounting standards, with its standards serving as the platform for nearly every corporate GHG reporting program[13]. The GHG Protocol offers a range of standards that provide guidance for different entities and goals, such as cities, corporations, and climate change mitigation. One of these standards is the Corporate Value Chain

10 GRI - Home (globalreporting.org)
11 'Double materiality': what is it and why does it matter? - Grantham Research Institute on climate change and the environment (lse.ac.uk)
12 Corporate Governance Update: "Materiality" in America and Abroad (harvard.edu)
13 Standards | GHG Protocol

(Scope 3) Standard. This standard provides companies with the ability to assess their entire value chain emissions, which will allow them to identify opportunities to reduce emissions. The Scope 3 Standard is widely utilized in both voluntary and regulatory applications. This standard is referenced in the SEC, EU, and ISSB standards, most commonly by referring to the Scope 3 categories established by the Protocol[14]. Categories are either upstream or downstream emissions. Upstream categories include purchased goods and services, upstream transportation and distribution, leased assets, and more, Downstream categories include use of sold products, end-of-life treatment of sold products, investments, etc.

The GHG Protocol advises companies to have a consistent consolidation approach when determining organizational boundaries. This will be a critical step to determining what qualifies as either a Scope 1, 2, or 3 emission.

Taskforce on Climate-related Financial Disclosures (TSFD)

The Financial Stability Board (FSB) is an international body established at the 2009 G20 summit to provide recommendations about the global financial system. The FSB established the TCFD to develop recommendations for what information companies should disclose to investors to properly assess and price risks, specifically the risks related to climate change[15]. TCFD members represent a variety of organizations, such as banks, insurance companies, asset managers, accounting firms, credit rating agencies, etc. The TCFD is viewed as a success in the ESG field, as its mandate from the FSB made companies and individuals take its mission seriously. TCFD illustrates that climate issues are a central business process, and should be treated as such, rather than an external process. The recommendations formed by TCFD represent a flexible framework that companies can use to guide their disclosures. The recommendations formed by TCFD are also a guide for important regulatory efforts, such as the CSRD in Europe, and SEC rules in the U.S. Those who are meeting TCFD recommendations should be in good shape to meet CSRD requirements.

The TCFD released a final report detailing these recommendations in 2017 and offered revisions in 2021. In the updates, TCFD recommends that all organizations disclosure Scope 1 and 2 emissions. Scope 3 disclosures are subject to materiality but are encouraged. The recommendations are targeted towards financial-sector organizations, such as banks and asset managers, however, there are considerations made for non-financial groups that will be most affected by climate change and the energy transition, including transportation. The four overarching recommendations are:

1. Disclose the organization’s governance around climate-related risks and opportunities.
2. Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material.
3. Disclose how the organization identifies, assesses, and manages climate-related risks.

[14] Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf (ghgprotocol.org)
[15] Task Force on Climate-Related Financial Disclosures | TCFD) (fsb-tcfd.org)

4. Disclose the metrics and targets used to assess and manage relevant climate related risks and opportunities where such information is material[16].

Each of these recommendations is accompanied by sub-recommendations. TCFD also highlights where certain sectors should be focusing their search. For the transportation sector, TCFD recommends the following focus points:

1. Financial risks around current plant and equipment, such as potential early write-offs of equipment and R&D investments or early phasing out of current products due to policy constraints or shifts or the emergence of new technology.
2. Investments in R&D of new technologies and potential shifts in demand for various types of transportation carriers.
3. Opportunities to use new technologies to address lower-emissions standards and increased fuel-efficiency requirements, including transport vehicles that run on a range of traditional and alternative fuels[17].

These recommendations from TCFD provide a framework for both financial institutions and industry to consider their climate-related risks. Using TCFD, a voluntary framework, as a guideline, can be a capacity-building exercise for those who are just beginning to consider such risks. It can be used in conjunction with GRI to identify issues and better inform strategies. Considering climate risks can also help businesses identify opportunities to cut costs, while reducing negative climate impacts.

The Big Three Standards

This section reviews EU, international, and U.S. proposals to require more expansive climate-related disclosures.

EU Corporate Sustainability Reporting Directive (CSRD)

The CSRD is an EU law that will require all listed companies to disclose information on climate risks and opportunities[18]. The CSRD practices double materiality, so companies must disclose the impact of climate change on the company, as well as the impact of the company on the planet[19]. The first companies will have to apply the new rules for the first time in FY 2024, publishing reports in 2025, with micro-enterprises exempt from CSRD reporting requirements. All covered entities will be required to report 2029, based on data from FY 2028.

This effort is part of a larger effort in the European Green Deal. Previous iterations of the ESG-related disclosures for EU companies took place under the Non-Financial Reporting Directive

[16] FINAL-2017-TCFD-Report.pdf (bbhub.io)
[17] 2021-TCFD-Implementing_Guidance.pdf (bbhub.io)
[18] Corporate sustainability reporting (europa.eu)
[19] EUR-Lex - 32022L2464 - EN - EUR-Lex (europa.eu)

(NFRD). The NFRD required large companies (public-interest companies with more than 500 employees) to disclose information regarding environmental issues, human rights, and diversity. NFRD requirements will remain in force until CSRD is in effect.

The CSRD will expand upon those required to make climate disclosures. Some of the characteristic of companies subject to disclosure are:

1. Companies with listed securities in the EU market, excluding micro enterprises that don't meet at least two of the size criteria for two consecutive balance sheets: a) €350,000 in total assets, b) €700,000 in net turnover, c) Average of 10 employees.
2. EU-based large undertakings. Large undertakings are defined as meeting at least two of the following criteria on consecutive balance sheets: a) Annual net turnover exceeding €40 million, b) Assets exceeding €20 million, c) An average of at least 250 employees throughout the year.
3. EU-based parent company of a group of entities that meet the criteria of a large undertaking as a group, including accommodations for consolidated reporting.
4. Parent companies from a country outside of the EU that in consolidation generate more than €150 million net turnover in the EU and meet any of these conditions: a) own a subsidiary considered a large undertaking, b) own a subsidiary with debt or securities on an EU exchange, c) own a significant EU branch with a net turnover >€40 million[20].

To develop the standards that will implement the CSRD, the European Commission adopted standards drafted by the European Financial Reporting Advisory Group (EFRAG). In June 2023, the first set of European Sustainability Reporting Standards (ESRS) were adopted, and will enter into force once published in the Official Journal.

In ESRS E1, it is stated that GHG emission reduction targets must be disclosed for Scope 1,2, or 3 emissions, either separately or combined[21]. Given that this is the gross emissions, reports should not include GHG removal or carbon credits that are used to achieve the targets. Reporting entities must also disclose their gross 1, 2, and 3 emissions separately, and the total GHG emissions. In the disclosure of total GHG emissions, a disaggregation should be included that makes a distinction of location-based Scope 2 measurements and market-based Scope 2 measurements. Entities will also need to disclose GHG emissions intensity, or total GHG emissions per net revenue. Companies that engage in GHG removal, mitigation projects, and carbon credits should also disclose these efforts. Entities must disclose whether they use internal carbon pricing, and within that disclosure, should disclose the approximate gross GHG emissions by Scopes 1 and 2 (Scope 3 where possible) covered by internal pricing schemes.

When applying ESRS E1, it's important to incorporate Appendix A, which helps outline a strategy towards compliance. A reporting entity must disclose a transition plan that details its efforts towards climate mitigation, including how it will be adjusting its business plan and strategy to be

[20] CSRD reporting: What you need to know | Grant Thornton
[21] ec.europa.eu/finance/docs/level-2-measures/csrd-delegated-act-2023-5303-annex-1_en.pdf

compatible with these efforts. As a part of this transition plan, entities should disclose the cumulative locked-in GHG emissions from key assets from the reporting year until 2030 and 2050. These locked-in emissions are the sum of Scope 1 and 2 emissions over the lifetime of key assets. Key assets are owned or controlled by the entity and are sources of significant Scope 1 and 2 emissions. These plans should also consider the locked-in emissions associated with the emissions of sold products if the entity has selected the "use of sold products" as a significant Scope 3 disclosure category.

G7 and G20 International Sustainability Standards Board

The International Sustainability Standards Board (ISSB) was established at COP26 by the International Financial Reporting Standards (IFRS) Foundation to be a sister organization to the International Accounting Standards Board. ISSB has been backed by organizations such as the G7 and G20 as it strives to build upon other initiatives, such as the TCFD. The ISSB has 4 objectives:

1. "To develop standards for a global baseline of sustainability disclosures;
2. To meet the information needs of investors;
3. To enable companies to provide comprehensive sustainability information to global capital markets; and
4. To facilitate interoperability with disclosures that are jurisdiction-specific and/or aimed at broader stakeholder groups[22]."

The first two sets of standards, IFRS S1 and IFRS S2, were released by ISSB in June 2023.

IFRS S1, *General Requirements for Disclosure of Sustainability-related Financial Information*, outlines disclosure requirements for companies to share with investors information regarding their sustainability related risks and opportunities over time[23]. IFRS S1 defines material information as information that if omitted or misstated could reasonably "influence decisions that primary users of general purpose financial reports make on the basis of those reports, which include financial statements and sustainability-related financial disclosures and which provide information about a specific reporting entity." IFRS S1 provides information about what entities must disclose, such as governance processes to oversee sustainability risks and opportunities, its strategy for managing these risks and opportunities, the processes used to identify, assess, and monitor these risks and opportunities, and its performance in relation to these risks and opportunities, as well as progress made towards targets set by the entity[24].

IFRS S2, *Climate-related Disclosures*, becomes effective for annual reporting periods beginning in 2024[25]. IFRS S2 seeks to capture information about climate-related risks and opportunities that will be useful for those who utilize general financial reports. IFRS S2 also requires the disclosure of Scope 1, 2, and 3 GHG emissions. In addition to disclosures of metric tons of CO_2e, ISFR S2 also

---

[22] IFRS - International Sustainability Standards Board
[23] IFRS S1
[24] IFRS - IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information
[25] IFRS S2

requires entities to disclose their measurement approach and its disclosure methods and reasoning for its approach. For Scope 1 and 2 emissions, emissions should be disaggregated between the consolidated accounting group and other investees, such as associates or joint ventures. Scope 2 emissions are location-based and should provide information about instruments necessary to understand the entity's Scope 2 emissions.

Scope 3 emissions should disclose within the Scope 3 categories outlined in the GHG Protocol Corporate Value Chain Accounting and Reporting Standard as well as additional information about the entity's emissions associated with its investments. ISSB states that entities should prioritize direct measurement of Scope 3 emissions wherever possible. Estimated measurements are likely to use data that represents the entity's activity that results in emissions (for example, miles traveled) or emissions factors that convert activity data into emissions (distance traveled into emissions data)

The ISSB standards are not yet mandatory in any jurisdictions, although ISSB has the backing of important organizations like the G7. ISSB supports both regulatory and voluntary adoption of standards[26].

U.S. Securities and Exchange Commission (SEC)

In March 2022, the SEC proposed a rule, *The Enhancement and Standardization of Climate-Related Disclosures for Investors*. The rule, once finalized, will require certain entities to include climate-related disclosures in registration statements and reports. Once expected to be released in late 2023, it seems that the SEC may delay the final rule until 2024[27]. This delay may be related to the inclusion of Scope 3 emissions in the rulemaking, which presents legal challenges. The proposed rule draws heavily from existing frameworks, such as TCFD and the Greenhouse Gas Protocol. Registrants will be required to disclose information such as:

1. The entity's governance of climate risks and risk management processes.
2. The expected material impact of climate-related risks on the entity's business and financial statements, in the short, medium, and long term.
3. Climate risks that are expected to impact the entity's business strategy, model, and outlook.
4. Impact of climate events (severe weather events, etc.) and transition activities on line items included in an entity' financial statements, as well as the impact o financial estimates and assumptions made in the statements[28].

The rule also requires disclosure related to Scope 1, 2, and 3 GHG emissions. Scope 1,2, and 3 emissions must be disclosed separately from each other. As proposed, these emissions must be disclosed both disaggregated by greenhouse gas, as well as in their aggregate form. Units used to disclose these emissions are CO2e, which is the standard within the GHG Protocol. Reporting

---

[26] IFRS - ISSB: Frequently Asked Questions
[27] SEC Climate Disclosure Rule Most Likely Not Final Until 2024, Effective 2026 (forbes.com)
[28] SEC.gov | SEC Proposes Rules to Enhance and Standardize Climate-Related Disclosures for Investors

entities may choose to use the standard generated by the GHG Protocol, the proposed rulemaking does not mandate this methodology, allowing for some flexibility.

Scope 3 emissions will be required for entities if material or if the entity has set an emissions target related to Scope 3 emissions. As with the GHG Protocol, there are several categories of upstream and downstream activities that should be included in the Scope 3 calculations, and must be disclosed, including investments. The data sources for Scope 3 calculations must be described, including whether some data came from members of the entity's value chain, and whether such reports could be verified. There may be situations where entities must use industry or national data averages when calculating Scope 3 emissions.

Smaller reporting companies (SRCs) are exempt from the Scope 3 reporting requirement. The rule does provide a safe harbor in the reporting of Scope 3 data, such that the disclosure of Scope 3 emissions by or on behalf of entities will not be considered a fraudulent statement unless shown to be made without a reasonable basis or good faith[29].

The phase-in dates proposed in the SEC rule are different for large accelerated filers, accelerated and non-accelerated filers, as well as SRCs. As proposed in March 2022, with the assumption of a December 2022 final rule, the deadline for Large Accelerated Filers' Scope 1 and 2 emissions begins with FY 2023 (reported in 2024) and Scope 3 for FY 2024 (reported in 2025). Accelerated Filers would have an additional FY for both categories. SRCs will being reporting disclosures (exclusive of Scope 3 emissions) in FT 2025 (filed in 2026). Information regarding the qualifications for reporting entity classifications can be found on the SEC website[30].

Anticipated U.S. State-Level Standards

This section details U.S. state-level ESG disclosure requirements. Currently, California is the only state that has passed such a requirement. However, there is legislation in some states that limits ESG considerations[31].

California

As the U.S. awaits the SEC final rule, California has taken preemptive action, by passing two climate disclosure bills, SB 253[32], and SB 261[33]. Both bills passed the State Legislature in September 2023, and were signed in October 2023. The rules mirror the SEC proposed rule but are more expansive because they apply to most large businesses doing business in California, not just publicly traded companies.

---

[29] Federal Register :: The Enhancement and Standardization of Climate-Related Disclosures for Investors
[30] SEC.gov | Accelerated Filer and Large Accelerated Filer Definitions
[31] ESG Investing Regulations Across the 50 States – Publications (morganlewis.com)
[32] Statelink
[33] Statelink

SB 253 would require CARB to develop and adopt regulations for partnerships, corporations, LLCs, and other business entities with total revenues that exceed $1 billion that do business in California. Under these regulations, companies would be required to report their Scope 1 and Scope 2 emissions starting in 2026. Starting in 2027, these companies would be required to report Scope 3 emissions for the prior fiscal year. CARB would be required to review these deadlines in 2029 and update the deadlines to reflect scope 3 reporting trends. This review could result in a change in the deadlines. Reporting entities would be required to obtain assurance engagement of their public disclosures conducted by an independent assurance provider. CARB is tasked with ensuring that the assurance process is streamlined, minimizing the need for multiple assurance providers, and allowing for timely reporting. CARB must contract with an emissions reporting organization to develop a reporting program that will be able to receive and publish these disclosures. CARB is further authorized, starting in 2033, to assess global GHG accounting and reporting standards and adopt an alternative standard, if doing so would further the goals of SB 253. CARB may adopt such regulations every 5 years.

SB 261 is very similar to SB 253; however, it sets a threshold of $500 million in total revenue at which covered entities would have to prepare biennial climate-related risk reports. SB 261 would not include companies regulated by the Department of Insurance, or insurance companies in other states. The first reports must be made publicly available beginning January 1, 2026, and biennially afterwards. SB 261 identifies “climate-related financial risk” as harm to financial outcomes due to physical and transition risks that include risks of corporate operations, supply chains, institutional investments, consumer demand, financial markets, etc. SB 261 does *not* explicitly list GHG emissions as a metric in these reports but references the proposed SEC rule that would require such disclosures. It is unclear if CARB, in developing the regulation for SB 261, would require the disclosure of Scope 1, 2 and 3 emissions.

Both SB 253 and SB 261 would require reporting entities would also be required to pay an annual fee into a fund which would help cover administrative costs incurred in the implementation of the bills. Governor Newsom has indicated despite signing the bills, he thinks they need some work. It is unclear if he will be delegating this task to CARB or another agency.

Appendix

Table 1. Comparing International Standards

	G20, FSB TCFD	EU CSRD/Scope 3	G7, G20 ISSB	U.S. SEC
Reporting Entities	Voluntary, widely used framework that now serves as a reference for required frameworks.	Certain companies with listed securities on EU market, EU-based large undertakings, EU based parent group of entities, Parent companies from a third country that in consolidation generate more than €150 million in net turnover and meet other criteria.	Voluntary- Not yet adopted as a requirement by any countries	Large accelerated filers, accelerated filers, non-accelerated filers and SRCs. Only SRCs are exempt from Scope 3 reporting.
Definition of Materiality	Climate impacts on a company are material. Doesn't include impacts of company on the environment.	Double Materiality. Impacts of climate on the company and the impacts of the company on the climate are material.	Climate impacts on a company (risks and opportunities). Doesn't include impacts of the company on the environment.	Reasonable Investor test. Include information that is likely to have a material impact on the business.
Scope 1 Requirements	Required	Required. Include percentage of Scope 1 emissions from regulated emission trading schemes	Required	Required
Scope 2 Requirements	Required	Required. Include the gross market-based Scope 2 emissions.	Required	Required
Scope 3 Requirements	Encouraged. Scope 3 should be included where material.	Required. Include GHG emissions from each significant Scope 3 category. Groups not exceeding an average number of 750	Required. Expect that a mix of direct measurements and estimations will be used.	Required if material or if the registrant has a set GHG emissions target that includes Scope 3 emissions.

		employees during the financial year may omit datapoints on Scope 3 emissions and total GHG emissions for the first year of sustainability statement preparation.		
Effective Reporting Dates	Guidelines became available in 2017 and were updated in 2021. As a voluntary framework, TCFD has served as a model for resulting regulatory frameworks, such as CSRD and SEC.	Organizations subject to NFRD: Reports due 2025. Large organizations not subject to NFRD: Reports due 2026. SMEs: Reports due 2027. Third country undertakings: Reports due 2029. All reports are based on data from the previous financial year.	IFRS S2- effective for annual reporting beginning January 2024	Unclear until a final rule is issued. April 2022 NPRM suggested a deadline of Large Accelerated Filers' Scope 1 and 2 emissions for FY 2023 and Scope 3 for FY 2024. Accelerated Filers would have an additional FY for both categories.