EFRAG
European Financial Reporting Advisory Group

[Draft] European Sustainability Reporting Standard E1
Climate change

DISCLAIMER

This working paper is an Appendix to and must be read in conjunction with the related document '*PTF-ESRS Batch 1 working papers – Cover note and next steps*', which establishes the general context, the status of this working paper and the subsequent due process steps to be followed.

WORKING PAPER

Table of content

Contents

OBJECTIVE 4

INTERACTIONS WITH OTHER ESRS 5

DISCLOSURE REQUIREMENTS 5

STRATEGY AND BUSINESS MODEL, GOVERNANCE AND ORGANISATION, IMPACTS, RISKS AND OPPORTUNITIES 5

[Disclosure Requirement 1] – Transition plan in line with the Paris Agreement 6

[Disclosure Requirement 2] - Resilience of the strategy and business model to principal climate-related transition and physical risks 6

[Disclosure Requirement 3] – Climate-related targets and performance indicators in relation to compensation schemes 7

[Disclosure Requirement 4] – Internal carbon pricing schemes 7

[Disclosure Requirement 5] – Processes to identify material climate-related impacts, risks and opportunities 8

[Disclosure Requirement 6] – Material climate-related impacts, risks and opportunities 8

POLICIES, TARGETS, ACTION PLANS AND RESOURCES 8

[Disclosure Requirement 7] – Policies implemented to manage climate change mitigation and adaptation 8

[Disclosure Requirement 8] – Measurable targets for climate change mitigation and adaptation 9

[Disclosure Requirement 9] – Climate change mitigation and adaptation action plans 10

[Disclosure Requirement 10] – Resources allocated to climate change mitigation and adaptation actions plans 10

PERFORMANCE MEASUREMENT 10

[Disclosure Requirement 11] – Energy consumption & mix 10

[Disclosure Requirement 12] – Energy intensity 11

[Disclosure Requirement 13] – Scope 1 GHG emissions 11

[Disclosure Requirement 14] – Scope 2 GHG emissions 12

[Disclosure Requirement 15] – Scope 3 GHG emissions 12

[Disclosure Requirement 16] – Total GHG emissions 12

[Optional Disclosure Requirement 17] – GHG removals 12

[Optional Disclosure Requirement 18] – Financing GHG mitigation projects outside of the undertaking's value chain 13

[Optional Disclosure Requirement 19] – Avoided GHG emissions from products and services 13

[Disclosure Requirement 20] – GHG intensity 13

[Taxonomy Disclosure Requirements] - Taxonomy Regulation for climate change mitigation and climate change adaptation 13

[Disclosure Requirement 21] – Financial exposure to physical risks 14

[Disclosure Requirement 22] – Financial exposure to transition risks 14

[Optional Disclosure Requirement 23] – Financial opportunities related to climate change mitigation or adaptation other than the Taxonomy Regulation 15

APPLICATION PROVISIONS 15

APPENDIX A: DEFINED TERMS 16

APPENDIX B: APPLICATION GUIDANCE 23

STRATEGY AND BUSINESS MODEL, GOVERNANCE AND ORGANISATION, IMPACTS, RISKS AND OPPORTUNITIES 23

[Disclosure Requirement 1] – Transition plan in line with the Paris Agreement 23

[Disclosure Requirement 2] - Resilience of the strategy and business model to principal climate-related transition and physical risks 24

[Disclosure Requirement 3] – Climate-related targets and performance indicators in relation to compensation schemes 24

[Disclosure Requirement 4] –Internal carbon pricing schemes 24

WORKING PAPER

[Disclosure Requirement 5] – Processes to identify material climate-related impacts, risks and opportunities 25
Disclosure Requirement 6] – Material climate-related impacts, risks and opportunities 29
POLICIES, TARGETS, ACTION PLANS AND RESOURCES 29
[Disclosure Requirement 7] – Policies implemented to manage climate change mitigation and climate change adaptation 30
[Disclosure Requirement 8] – Measurable targets for climate change mitigation and adaptation 30
[Disclosure Requirements 9 & 10] – Climate change mitigation and adaptation action plans & resources 33
PERFORMANCE MEASUREMENT 34
[Disclosure Requirement 11] – Energy consumption & mix 34
[Disclosure Requirement 12] – Energy intensity per revenue 36
[Disclosure Requirements 13, 14, 15 & 16] – GHG emissions 36
[Optional Disclosure Requirement 17] – GHG removals 40
[Optional Disclosure Requirement 18] – Financing GHG mitigation projects outside of the undertaking's value chain 41
[Optional Disclosure Requirement 19] – Avoided GHG emissions from products and services 41
[Disclosure Requirement 20] – GHG intensity per revenue 43
[Disclosure Requirement 21] – Financial exposure to physical risks 43
[Disclosure Requirement 22] – Financial exposure to transition risks 46
[Optional Disclosure Requirement 23] – Financial opportunities relating to climate change mitigation and adaptation 50
APPENDIX C: DIGITISATION GUIDANCE 50
BASIS FOR CONCLUSIONS 51

WORKING PAPER

[Draft] European Sustainability Reporting Standard E1 Climate change

Objective

1 The objective of this [draft] standard is to specify Disclosure Requirements which will enable users of the sustainability reporting to understand:

(a) the impact of the undertaking on climate change and its past, current, and future mitigation efforts in line with the Paris Agreement and limiting global warming to 1.5°C;

(b) the plans and capacity of the undertaking to adapt its business model(s) and operations in line with the transition to a sustainable economy and to contribute to limiting global warming to 1.5°C;

(c) the nature, type and extent of the climate-related risks and opportunities to which the undertaking is exposed; and

(d) the effects of climate-related risks and opportunities on the undertaking's existing assets and liabilities and ability to generate future cash-flows and therefore to create enterprise value in the short, medium and long term.

2 This standard derives from the (draft) CSRD stating that the sustainability reporting standards shall specify information to disclose about climate change mitigation and climate change adaptation.

3 This standard covers Disclosure Requirements developed primarily from the perspective and for the reporting purpose of non-financial undertakings[1]. However financial undertakings shall apply this standard in relation to their own operations and value chain, it being understood that they are in addition subject to specific regulatory and other sector-specific Disclosure Requirements as their main impacts, risks and opportunities are indirect via their portfolio of financial products and services.

4 This standard covers Disclosure Requirements related to "Climate change mitigation" and "Climate change adaptation" and covers "Energy" matters.

5 "Climate change mitigation" relates to the undertaking's endeavours to the general process of holding the increase in the global average temperature to well below 2 °C and pursuing efforts to limit it to 1,5 °C above pre-industrial levels, as laid down in the Paris Agreement. This standard covers Disclosure Requirements related to the seven Greenhouse Gases (GHG) carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). It also covers Disclosure Requirements on how the undertaking addresses its GHG emissions as well as the transition risks associated with them. Other impacts on climate change (e.g., from land use changes, black carbon, tropospheric ozone etc.), are not yet explicitly addressed by this standard.

6 "Climate change adaptation" relates to the undertaking's process of adjustment to actual and expected climate change. This standard covers Disclosure Requirements regarding climate-related hazards that can lead to physical climate risks for the undertaking and adaptation solutions that can reduce these risks. It also covers transition risks arising from the adaptation needs to climate-related hazards.

7 "Energy" covers all types of energy production and consumption.

[1] A non-financial undertaking means an undertaking that is subject to the disclosure obligations laid down in Articles 19a and 29a of Directive 2013/34/EU and is not a financial undertaking, i.e. an asset manager, a credit institution as defined in Article 4(1), point (1), of Regulation (EU) No 575/2013 of the European Parliament and of the Council22, an investment firm as defined in Article 4(1), point (2), of Regulation (EU) No 575/2013, an insurance undertaking as defined in Article 13, point (1), of Directive 2009/138/EC of the European Parliament and of the Council23, or a reinsurance undertaking as defined in Article 13, point (4) of Directive 2009/138/EC [Disclosures Delegated Act of the (EU) 2020/852 Regulation, commonly referred to as the Taxonomy Regulation

WORKING PAPER

8 Additional performance measures deemed relevant for the future enhancement of the climate standard are presented as part of the Basis for conclusions although they have not been prioritised for this standard. They relate to energy intensity, use of green hydrogen, breakdowns of GHG emissions and breakdowns of GHG intensity.

9 Should the undertaking wish to provide information on these matters on a voluntary basis, it may consider best practices and preliminary orientations presented in the Basis for conclusions.

Interactions with other ESRS

10 Ozone-depleting substances (ODS), nitrogen oxides (NO_X) and sulfur oxides (SO_X), among other significant air emissions, are connected to climate change, but are covered under the reporting requirements on Pollution (ESRS E2). Fair transition is covered under the social ESRS. In particular, unemployment linked to the decommissioning of stranded assets (e.g. shut down of production of power plants) is covered under the reporting requirements on workforce.

11 The contents of this standard on Strategy and business model, Governance and organisation and Impacts, risks and opportunities, as well as Policies, targets, action plans and resources shall be read in conjunction respectively with cross-cutting standards ESRS 2, ESRS 3, ESRS 4 and cross-cutting reference standard ESRS 5.

12 This standard covers sector-agnostic Disclosure Requirements. Sector-specific Disclosure Requirements are developed separately and in accordance with the classification following ESRS SEC 1.

Disclosure Requirements

Strategy and business model, governance and organisation, Impacts, risks and opportunities

13 The Disclosure Requirements regarding climate change and (i) Strategy and business model, (ii) Governance and organisation, and (iii) Impacts, risks and opportunities are defined below.

14 The specific climate-related Disclosure Requirements hereafter (Disclosure Requirements 1 to 6) shall be read as complementary to the relevant cross-cutting standards (ESRS 2, ESRS 3 and ESRS 4) and they are to be reported upon by the undertaking under the related cross-cutting standards. The information to be covered by Disclosure Requirements 1 to 6 are those that due to their importance to the undertaking are prioritised and monitored directly by the undertaking's highest governing bodies.

15 With regards to the climate-related Disclosure Requirements in ESRS 2 Strategy and business model, this topical standard includes two specific Disclosure Requirements. Disclosure Requirement 1 covers the information to be provided on the 1.5 °C transition plan of the undertaking and Disclosure Requirement 2 covers the information to be provided on the resilience of the strategy and business model to principal climate-related transition and physical risks.

16 With regards to the climate-related Disclosure Requirements in ESRS 3 Governance and organisation, this topical standard includes two specific Disclosure Requirements. Disclosure Requirement 3 covers the information to be provided on climate-related targets and performance indicators in relation to compensation schemes and Disclosure Requirement 4 covers the information to be provided on internal carbon pricing schemes.

17 With regards to the climate-related Disclosure Requirements in ESRS 4 on Impacts, risks and opportunities, this topical standard includes two specific Disclosure Requirements. Disclosure Requirement 5 covers the information to be provided on the processes to identify

WORKING PAPER

material climate-related impacts, risks and opportunities and Disclosure Requirement 6 covers the information to be provided on material climate-related impacts, risks and opportunities.

Specific climate-related disclosures for the implementation of ESRS 2 Strategy and business model

[Disclosure Requirement 1] – Transition plan in line with the Paris Agreement

18 **The undertaking shall disclose its plans to ensure that its business model and strategy are compatible with the transition to a climate-neutral economy and with limiting global warming to 1.5 °C in line with the Paris Agreement.**

19 The principle to be followed under this Disclosure Requirement is to provide an understanding of the transition plan of the undertaking and its compatibility with limiting global warming to 1.5°C in accordance with the Disclosure Requirements 7 and 8 under ESRS 2.

20 The disclosure required by paragraph 18 shall include:

(a) by reference to the short medium- and long-term targets to reduce GHG emissions in own operations and along the value chain (Disclosure Requirement 8), an explanation of their alignment with limiting global warming to 1.5°C;

(b) by reference to GHG reduction targets (Disclosure Requirement 8) and the climate change mitigation action plan (Disclosure Requirement 9), an explanation of the decarbonisation levers identified and key actions planned, including the adoption of new technologies;

(c) by reference to the information provided under Disclosure Requirement 10, an explanation of the financial resources supporting the implementation of the transition plan;

(d) the locked-in GHG emissions from key assets and products, including a discussion about if and how these can jeopardise the achievement of GHG emission reduction targets and drive transition risk, and the plans to manage GHG- and energy-intensive assets and products;

(e) an explanation of the role of aligning its economic activities with the provisions of Delegated Act (EU) 2021/2139 for its transition to a climate-neutral economy, including the plans for future Taxonomy-alignment;

(f) an explanation of how the transition plan is embedded in and aligned with its overall business strategy;

(g) an explanation of the progress made in implementing the transition plan.

[Disclosure Requirement 2] - Resilience of the strategy and business model to principal climate-related transition and physical risks

21 **The undertaking shall disclose information on the resilience of the strategy and business model(s) of the undertaking to principal climate-related transition and physical risks.**

22 The principle to be followed under this Disclosure Requirement is to provide an understanding of whether the undertaking's strategy and business model(s) can withstand principal climate-related risks over time and under different plausible future states. It shall be disclosed in accordance with the Disclosure Requirement 8 under ESRS 2.

23 The disclosure required by paragraph 21 shall include the following information:

(a) the scope of the resilience analysis, particularly the activities – in own operations and the value chain – and related principal transition and physical climate-related risks covered;

WORKING PAPER

(b) how the resilience analysis has been conducted, including:

  (i) whether it has been conducted by comparing a diverse range of climate-related scenarios;

  (ii) which climate scenarios were used for the assessment and why, along with the sources of the scenarios and critical assumptions made;

  (iii) the time horizons over which the analysis has been conducted;

(c) the results of the resilience analysis.

Specific climate-related disclosures for the implementation of ESRS 3 Governance and organisation

[Disclosure Requirement 3] – Climate-related targets and performance indicators in relation to compensation schemes

24 **The undertaking shall disclose whether and how it integrates climate-related targets and performance indicators in compensation schemes.**

25 The principle to be followed under this Disclosure Requirement is to provide an understanding of how the undertaking's compensation schemes involve climate-related performance indicators and incentivise the achievement of climate-related targets. It shall be disclosed in accordance with the Disclosure Requirement 4 under ESRS 3.

26 The disclosure required by paragraph 24 shall include:

(a) a description of whether and how climate-related performance indicators are incorporated into the undertaking's remuneration practices;

(b) the link with the achievement of GHG emission reductions.

[Disclosure Requirement 4] – Internal carbon pricing schemes

27 **The undertaking shall disclose whether and how the internal carbon pricing schemes applied support its climate-related decision making.**

28 The principle to be followed under this Disclosure Requirement is to provide an understanding of whether and how internal carbon pricing schemes incentivise the reduction of an undertaking's GHG emissions and support the assessment, anticipation and management of climate-related transition risks and opportunities. It shall be disclosed in accordance with ESRS 3.

29 The disclosure required by paragraph 27 shall include the following information:

(a) a description of whether and how the undertaking applies internal carbon pricing schemes, including the type of internal carbon pricing scheme such as:

  (i) shadow prices for CapEx or R&D investment decision making;

  (ii) internal carbon fee or fund affecting the internal results of the business units or operating segments (internal transfer from high emitting entities to fund low carbon projects that may be more costly);

  (iii) other schemes;

(b) the specific scope of application of the carbon pricing scheme (activities, geographies, entities, etc.);

(c) the carbon prices applied according to the type of scheme and critical assumptions;

(d) the approximate current year GHG emission volumes covered by these schemes.

WORKING PAPER

Specific climate-related disclosures for the implementation of ESRS 4 Impacts, risks and opportunities

[Disclosure Requirement 5] – Processes to identify material climate-related impacts, risks and opportunities

30 **The undertaking shall disclose its processes to identify and assess its:**

(a) **climate-related impacts;**

(b) **climate-related physical risks and opportunities;**

(c) **climate-related transition risks and opportunities.**

31 The disclosure required by paragraph 30 shall include a description of the processes to identify those impacts, risks and opportunities that due to their importance for the undertaking are prioritised and monitored directly by the undertaking's highest governing bodies. It shall be disclosed in accordance with ESRS 4, Disclosure Requirement 1.

[Disclosure Requirement 6] – Material climate-related impacts, risks and opportunities

32 **The undertaking shall disclose a description of its:**

(a) **climate-related impacts;**

(b) **climate-related physical risks and opportunities;**

(c) **climate-related transition risks and opportunities.**

33 The principle to be followed under this Disclosure Requirement is to provide an understanding of the climate-related impacts, risks and opportunities that due to their importance to the undertaking are prioritised and monitored directly by the undertaking's highest governing bodies. It shall be disclosed in accordance with ESRS 4, Disclosure Requirement 2.

34 The disclosure required by paragraph 32 shall rely on the outcome of the processes to identify and assess climate-related impacts, risks and opportunities (Disclosure Requirement 5).

Policies, targets, action plans and resources

35 The Disclosure Requirements developed hereafter refer to ESRS 5 Definitions for policies, targets, action plans and resources.

[Disclosure Requirement 7] – Policies implemented to manage climate change mitigation and adaptation

36 **The undertaking shall disclose separately its policy for climate change mitigation and its policy for climate change adaptation.**

37 The principle to be followed under this Disclosure Requirement is to provide an understanding of the undertaking's ability (i) to mitigate its negative impacts and maximise its positive impact on climate change throughout the value chain and (ii) to monitor and manage its physical and transition risks and opportunities.

38 The disclosure required by paragraph 36 shall include:

(a) a summarised description of the policy, including its general objectives;

(b) a description of the scope of the undertaking's policy, including own operations, value chain activities and other business relationships;

WORKING PAPER

(c) a description of the allocation of responsibilities, including oversight, for the implementation of the policy across all relevant operational levels;

(d) a description of third-party standards of conduct, if any, that the undertaking commits to respect through the implementation of the policy such as the recommendations of the Task Force on climate-related financial disclosures (TCFD) or the Science-based Targets Initiative (SBTi); and

(e) a description of the considerations given to the interests of stakeholders in setting the policy.

[Disclosure Requirement 8] – Measurable targets for climate change mitigation and adaptation

39 **The undertaking shall disclose its adopted climate-related targets.**

40 The principle to be followed under this Disclosure Requirement is to provide an understanding of the GHG emission reductions that the undertaking intends to achieve in the future and their effectiveness in ensuring compatibility with limiting global warming to 1.5 °C. In addition, it may include other climate-related targets the undertaking has adopted, such as climate change adaptation targets to provide an understanding of how the undertaking manages physical risks resulting from climate change and reduces its vulnerability to these risks.

41 The disclosure required by paragraph 39 shall include:

(a) an explanation of what each target intends to achieve (e.g., GHG emission reduction, net zero, physical or transition risk mitigation, increase of CapEx or others) and how it is embedded in the undertaking's climate-related policies;

(b) the scope of the target and the explanation of any limitations as to organisational and geographical boundaries or activities;

(c) the baseline value and base year against which progress is measured;

(d) the timeframe to achieve the target and the target values to be achieved, including any milestones or interim targets;

(e) the methodologies and significant assumptions used to define targets, including where applicable, the underlying scenarios and alignment with science-based methodologies;

(f) any changes in targets or underlying methodologies and assumptions adopted within the defined time horizon together with an explanation of the rationale for those changes and their effect on comparability;

(g) the overall progress towards the defined target, including information on whether the progress is in line with what had been initially planned, and an analysis of trends or significant changes in performance of the undertaking towards achieving the target; and

(h) whether the target is absolute or intensity-based and in which unit it is measured.

42 The disclosure required by paragraph 41 shall include the undertaking's GHG emissions reduction targets for Scope 1, 2, and 3 and in addition:

(a) an explanation of the expected contributions from different decarbonisation levers to the achievement of the target (e.g., electrification and deployment of renewable energy; energy or resource efficiency; reduced lifecycle emissions of products);

(b) a presentation of the information over the target period preferably in five years rolling periods and at least including target values for the years 2030 and 2050;

(c) a presentation of the information over the target period with reference to a 1.5°C climate scenario or, if not available, with reference to the -55% EU GHG emissions reduction target in 2030. It may be presented as a graphical pathway or trajectory.

43 If the undertaking has not adopted targets meeting the criteria included in paragraphs 41 and 42, it shall disclose:

WORKING PAPER

(a) if and when such targets will be adopted; or

(b) reasons why there is no plan to adopt such targets;

(c) how progress is measured without specific climate-related targets and;

(d) the progress made in terms of climate change mitigation and adaptation.

[Disclosure Requirement 9] – Climate change mitigation and adaptation action plans

44 **The undertaking shall disclose its climate change mitigation and adaption action plans.**

45 The principle to be followed under this Disclosure Requirement is to provide transparency on the key actions taken and planned to achieve climate-related targets and to manage GHG emissions, transition and physical risks and opportunities, supporting the understanding of achieved performance improvements and the credibility of the undertaking's strategy and business model.

46 The disclosure required by paragraph 44 shall include:

(a) the list of key actions taken in the reporting year and planned for the future, covering own operations and the value chain;

(b) the period during which each key action is intended to be implemented;

(c) the expected outcomes of each key action and their contribution to achieving climate targets (for the climate change mitigation plan, the achieved or expected GHG emission reductions of each key action);

(d) an explanation of changes in the action plan and any further explanation deemed useful to understand key actions.

[Disclosure Requirement 10] – Resources allocated to climate change mitigation and adaptation actions plans

47 **The undertaking shall disclose financial and other resources allocated to climate change mitigation and adaptation action plans.**

48 The principle to be followed under this Disclosure Requirement is to provide an understanding of the seriousness of actions taken and planned in order to achieve climate-related targets and to manage GHG emissions, transition and physical risks and opportunities, particularly where the implementation of the action plan requires substantial capital expenditures and/or other resources.

49 The disclosure required by paragraph 47 shall include:

a) the resources needed in order to implement the action plans;

b) a reconciliation of the monetary amounts disclosed with the most relevant amount presented in the financial statements.

WORKING PAPER

Performance measurement

[Disclosure Requirement 11] – Energy consumption & mix

50 **The undertaking shall provide information on its energy consumption.**

51 The principle to be followed under this Disclosure Requirement is to provide an understanding of:

(a) the undertaking's energy consumption to allow a monitoring of the reduction of absolute energy consumption and improvement in energy efficiency; and

(b) the increase of the share of renewable energy in the overall energy mix to succeed in the transition to a climate neutral European Union.

52 This Disclosure Requirement supports the information needs of financial market participants subject to the Sustainable Finance Disclosure Regulation (EU) 2019/2088 (SFDR).

53 The disclosure required by paragraph 50 shall include the total energy consumption in MWh as follows:

(a) total energy consumption from non-renewable sources, broken down by:

(i) fuel consumption from coal and coal products;

(ii) fuel consumption from crude oil and petroleum products;

(iii) fuel consumption from natural gas;

(iv) fuel consumption from other non-renewable sources;

(v) consumption from nuclear products;

(vi) consumption of purchased or acquired electricity, heat, steam, and cooling from non-renewable sources;

(b) total energy consumption from renewable sources, broken down by:

(i) fuel consumption for renewable sources (including biomass, biogas, non-fossil fuel waste, hydrogen from renewable sources, etc.);

(ii) consumption of purchased or acquired electricity, heat, steam, and cooling from renewable sources;

(iii) consumption of self-generated non-fuel renewable energy.

[Disclosure Requirement 12] – Energy intensity

54 **The undertaking shall provide information on the energy consumption associated with activities in high climate impact sectors per net turnover.**

55 The principle to be followed under this Disclosure Requirement is to support the information needs of financial market participants subject to the SFDR.

56 The disclosure required by paragraph 54 shall provide the information in MWh/Monetary unit.

57 The undertaking shall disclose a reconciliation of the net turnover reference to the most relevant amount presented in the financial statements.

[Disclosure Requirement 13] – Scope 1 GHG emissions

58 **The undertaking shall disclose its gross Scope 1 GHG emissions in metric tons of CO_2 equivalent.**

59 The principle to be followed under this Disclosure Requirement is to provide an understanding of the direct impacts of the undertaking on climate change and the part of its GHG emissions that are regulated under emission trading schemes. This information is also a prerequisite to understand the undertaking's climate-related transition risks.

60 The Disclosure Requirements on GHG emissions also serve the purpose of allowing financial institutions to fulfil their reporting obligations under the SFDR.

61 The disclosure required by paragraph 58 shall include:

(a) the gross Scope 1 GHG emissions in metric tons of CO_2 equivalent; and

(b) the share of Scope 1 GHG emissions under regulated emission trading schemes (%).

WORKING PAPER

[Disclosure Requirement 14] – Scope 2 GHG emissions

62 **The undertaking shall disclose its indirect energy Scope 2 GHG emissions in metric tons of CO_2 equivalent.**

63 The principle to be followed under this Disclosure Requirement is to provide an understanding of the impacts on climate change caused by the undertaking's consumed energy whether externally acquired or purchased.

64 The disclosure required by paragraph 62 shall include:

(a) its gross location-based Scope 2 GHG emissions in metric tons of CO_2 equivalent; and

(b) its gross market-based Scope 2 GHG emissions in metric tons of CO_2 equivalent.

[Disclosure Requirement 15] – Scope 3 GHG emissions

65 **The undertaking shall disclose its gross indirect Scope 3 GHG emissions in metric tons of CO_2 equivalent.**

66 The principle to be followed under this Disclosure Requirement is to provide an understanding of the GHG emissions that occur in the undertaking's value chain. For many undertakings, Scope 3 GHG emissions are the main components of the GHG inventory and an important driver of their transition risks.

67 The disclosure required by paragraph 65 shall include GHG emissions from significant Scope 3 categories and presented as a breakdown by GHG emissions from: (i) upstream purchasing, (ii) downstream sold products, (iii) goods transportation, (iv) travels and (v) financial investments.

[Disclosure Requirement 16] – Total GHG emissions

68 **The undertaking shall disclose its total GHG emissions in metric tons of CO_2 equivalent.**

69 The principle to be followed under this Disclosure Requirement is to provide an overall understanding of the undertaking's GHG emissions and whether they occur from own operations or the value chain. The disclosure is a prerequisite for measuring progress towards reducing GHG emissions in accordance with the undertaking's climate-related targets and the EU policy goals as well as for the assessment of the undertaking's transition risks.

70 The disclosure required by paragraph 68 shall be the sum of Scope 1 GHG emissions under Disclosure Requirement 13, Scope 2 GHG emissions under Disclosure Requirement 14 and Scope 3 GHG emissions under Disclosure Requirement 15 and be presented in terms of location-based and market-based approaches.

[Optional Disclosure Requirement 17] – GHG removals

71 **The undertaking may disclose GHG removals from its own operations as well as in the value chain in metric tons of CO_2 equivalent.**

72 The principle to be followed under this optional Disclosure Requirement is to allow the undertaking to disclose in a comparable manner its actions taken to permanently remove or support the removal of GHG from the atmosphere. If permanently stored, removals of GHG emissions from the atmosphere are an important means of combatting climate change. The undertaking shall therefore provide transparency on whether and to what extent it removes GHG from the atmosphere.

73 If the undertaking discloses the information according to paragraph 71, it shall include a description of whether removals are nature-based, geological or hybrid; it shall also provide technological details of the removals, calculation assumptions, methodologies and frameworks applied.

WORKING PAPER

[Optional Disclosure Requirement 18] – Financing GHG mitigation projects outside of the undertaking's value chain

74 **The undertaking may disclose the financing of GHG mitigation projects outside its value chain.**

75 The principle to be followed under this optional Disclosure Requirement is to provide an understanding of the extent and quality of the funding of projects that avoid, reduce or remove GHG emissions outside the undertaking's value chain (also commonly referred to as carbon offsets), as carbon offsets purchased from or sold to the voluntary market are a frequent manner of complementing actions to reduce GHG emissions.

76 If the undertaking discloses the information according to paragraph 74, it shall include:

(a) the total purchased carbon offsets in metric tons of CO_2 equivalent if any;

(b) the total sold carbon offsets in metric tons of CO_2 equivalent if any;

(c) a description of the quality criteria applied and the standards that the carbon offsets fulfil.

[Optional Disclosure Requirement 19] – Avoided GHG emissions from products and services

77 **The undertaking may disclose its estimated total avoided GHG emissions from its products and services in metric tons of CO_2 equivalent.**

78 The principle to be followed under this optional Disclosure Requirement is to to provide transparency on the methodologies used and assumptions made by undertakings when estimating and communicating about the GHG impacts of their products and services in comparison to other products and services or in comparison to a situation where their products and services would not exist, considering that there is currently no generally accepted framework for accounting and reporting on such avoided emissions.

79 If the undertaking discloses the information according to paragraph 77, it shall provide details on:

(a) the assumptions made;

(b) data sources used and methodologies applied to estimate the comparative impacts (baseline and reference products for assessing additionality); and

(c) identified trade-offs with other (non-GHG) environmental impacts.

[Disclosure Requirement 20] – GHG intensity

80 **The undertaking shall disclose its total GHG emissions per net turnover.**

81 The principle to be followed under this Disclosure Requirement is to support the information needs of financial market participants subject to the SFDR.

82 The disclosure required by paragraph 82 shall provide the GHG emissions in metric tons of CO_2 equivalent per turnover, in monetary units.

83 The undertaking shall disclose a reconciliation of the net turnover reference to the most relevant amount presented in the financial statements.

[Taxonomy Disclosure Requirements] - Taxonomy Regulation for climate change mitigation and climate change adaptation

84 The undertaking shall disclose information required by Article 8 of the Regulation (EU) 2020/852 (Taxonomy Regulation) in conjunction with Annex I and Annex II of Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 and with the Commission Delegated

WORKING PAPER

Regulation (EU) 2021/2178 of 6 July 2021, both supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council.

85 The Taxonomy Regulation in its Article 8(2) requires undertakings to disclose information on the proportion of the turnover, capital expenditure ('CapEx') and operating expenditure ('OpEx') associated with economic activities that qualify as environmentally sustainable, and in particular under the objectives of 'climate change mitigation' and 'climate change adaptation'.

86 The information to be disclosed under the climate-related provisions of the Taxonomy regulation is complementary to the information disclosed under the provisions of this standard. The undertaking may elect to locate the climate-related Taxonomy Disclosure Requirements as a Disclosure Requirement additional to the ones mandated by this standard. If the undertaking is not electing to do so, it should disclose the location of the Taxonomy Disclosure Requirements by an appropriate cross-reference.

[Disclosure Requirement 21] – Financial exposure to physical risks

87 **The undertaking shall disclose its financial exposure to physical risks.**

88 The principle to be followed under this Disclosure Requirement is to provide an understanding of how principal climate-related physical risks may affect the undertaking's financial position and performance over the short, medium and long term, considering that those potential future financial effects of climate-related physical risks may not meet at the reporting date the recognition criteria set for financial statements.

89 The disclosure required by paragraph 87 shall provide information on how its principal climate-related physical risks (Disclosure Requirement 6) may affect its future performance, position and development in terms of:

(a) amounts (monetary unit) of assets exposed to physical risks;

(b) share (%) of turnover from its business activities exposed to physical risks.

90 The undertaking shall disclose a reconciliation of these assets and share of turnover to the most relevant amounts presented in the financial statements.

[Disclosure Requirement 22] – Financial exposure to transition risks

91 **The undertaking shall disclose its financial exposure to transition risks.**

92 The principle to be followed under this Disclosure Requirement is to provide an understanding of how principal climate-related transition risks may affect the undertaking's financial position and performance over the short, medium and long term, considering that those potential future financial effects of climate-related transition risks may not meet at the reporting date the recognition criteria set for financial statements.

93 The disclosure required by paragraph 91 shall provide information on how its principal climate-related transition risks may affect its:

(a) future financial position in terms of:

(i) assets (monetary unit) exposed to transition risks over the short, medium, and long-term;

(ii) liabilities (monetary unit) that may have to be recognised over the short, medium, and long-term;

(b) future financial performance in terms of share (%) of turnover from its business activities exposed to transition risks.

94 The undertaking shall disclose a reconciliation of these assets and turnover to the most relevant amount presented in the financial statements.

WORKING PAPER

[Optional Disclosure Requirement 23] – Financial opportunities related to climate change mitigation or adaptation other than the Taxonomy Regulation

95 **The undertaking may disclose its financial opportunities that relate to climate change mitigation or adaptation and that complement the Taxonomy Regulation related ones.**

96 The principle to be followed under this Disclosure Requirement is to provide information allowing for an overall understanding of the financial opportunities related to climate change mitigation and climate change adaptation, complementing the information requested under the Taxonomy Regulation.

97 If the undertaking discloses the information according to paragraph 95, it shall include an assessment of the market size for low carbon products and services or adaptation solution over the short-, medium-, and long-term, explaining how these are defined, how financial amounts are estimated and which critical assumptions are made.

Application provisions

98 In order to ease the first-time application of this standard, the application of the following aspects of the four Disclosure Requirements listed below may be deferred by one year:

(a) Disclosure Requirement 2 on Resilience of the strategy and the business model: the undertaking may elect not to disclose the assessment demonstrating how the undertaking's financial performance supports the resilience of its strategy and business model over the short, medium and long term as required under paragraph AG8. (b);

(a) Disclosure Requirement 15 on Scope 3 GHG emissions: the undertaking may elect not to apply this Disclosure Requirement;

(b) Disclosure Requirement 16 on Total GHG emissions: based on the provisions for Disclosure Requirement 15, the undertaking may elect to exclude Scope 3 GHG emissions from the total GHG emissions;

(c) Disclosure Requirement 21 on Financial exposure to physical risks, the undertaking may elect not to apply this Disclosure Requirement with regards to:

(i) its share of turnover from its business activities exposed to physical risks required under paragraph 89 (b);

(ii) its value chain.

(d) Disclosure Requirement 22 on Financial exposure to transition risks: the undertaking may elect not to apply this Disclosure Requirement with regards to:

(i) Its future financial performance in terms of share of turnover from its business activities exposed to transition risks under paragraph 93 (b);

(ii) its value chain.

99 The undertaking shall indicate if the deferral option is retained or if it complies fully with the above-mentioned Disclosure Requirements.

WORKING PAPER

Appendix A: Defined terms

This appendix is integral part of the [draft] ESRS.

(Anthropogenic) Removals	(Anthropogenic) Removals refer to the withdrawal of GHGs from the atmosphere as a result of deliberate human activities. These include enhancing biological sinks of CO_2 and using chemical engineering to achieve long-term removal and storage. Carbon capture and storage (CCS) from industrial and energy-related sources, which alone does not remove CO_2 in the atmosphere, can reduce atmospheric CO_2 if it is combined with bioenergy production (BECCS). See also Anthropogenic emissions, Bioenergy with carbon dioxide capture and storage (BECCS) and Carbon dioxide capture and storage (CCS). (IPCC, 2018: Annex I: Glossary)
1.5°C climate target	A 1.5° climate target is a specific objective related to GHG emissions reduction using reduction pathways at a global and sectoral level that are aligned with the remaining budget to limit global warming to 1.5ºC with a 50% probability which is about 500 GT of CO_2 (IPCC, 2021).
Attributional approach	Attributional approach estimates the difference in total life cycle GHG emissions between an undertaking's product and some alternative product that provides an equivalent function. (WRI 2018)
Avoided emissions	Avoided emissions are understood as estimated GHG reductions of an undertaking's products in comparison to other products that fulfil an equivalent function or to a situation where the product does not exist. (Note: the notion of "products" includes services)
Base year	Base year is a historical datum against which a measurement is tracked over time. (GRI 305:2016)
Biomass	Biomass is the biodegradable fraction of products, waste, and residues from biological origin from agriculture, including vegetal and animal substances, from forestry and related industries, including fisheries and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin. (Art. 2 (24) Directive (EU) 2018/2001)
Boundaries of Scope 3 categories	Boundaries of Scope 3 categories are the activities over the value chain that should be accounted for in each Scope 3 category, in particular in the 'Purchased goods and services' and 'Use of product sold' categories; the GHG Protocol Scope 3 standard has defined minimum boundaries by Scope 3 category; Scope 3 boundaries will require developments in future sector-specific standards to improve the comparability.

WORKING PAPER

Business activities exposed to climate-related physical risks	Business activities exposed to climate-related physical risks refer to potential future increases or decreases in revenues and costs i.e., financial performance, for example due to business interruptions, increased supply prices, etc. resulting in potential margins erosions.
Carbon dioxide (CO_2) equivalent	Carbon dioxide (CO_2) equivalent is the universal unit of measurement to indicate the global warming potential (GWP) of each greenhouse gas, expressed in terms of the GWP of one unit of carbon dioxide. It is used to evaluate releasing (or avoiding releasing) different greenhouse gases against a common basis. (GHG Protocol Scope 2 Guidance Glossary)
Climate change adaptation	Climate change adaptation means the process of adjustment to actual and expected climate change and its impacts. (based on the Regulation (EU) 2020/852)
Climate change mitigation	Climate change mitigation means the process of holding the increase in the global average temperature to well below 2 °C and pursuing efforts to limit it to 1,5 °C above pre-industrial levels, as laid down in the Paris Agreement. (based on the Regulation (EU) 2020/852)
Climate change mitigation Taxonomy-aligned economic activity	Climate Change Mitigation Taxonomy-aligned economic activity is an economic activity that complies with the requirements laid down in Art. 3 Regulation (EU) 2020/852 related to climate change mitigation in conjunction with the provisions of the Commission Delegated Regulation (EU) 2021/2139 (Climate Delegated Act). (ased on Art 1 (2) Commission Delegated Regulation (EU) 2021/2178 supplementing Art. 8 of Regulation (EU) 2020/852)
Climate hazards	Climate hazards refer to the potential occurrence of a natural or human-induced climate-related physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources.
Climate-related physical risk	Climate-related physical risks are risks that arise from the physical effects of climate change. They typically include acute physical risks, which arise from particular events, especially weather-related events such as storms, floods, fires or heatwaves, and chronic physical risks, which arise from longer-term changes in the climate, such as temperature changes, rising sea levels, reduced water availability, biodiversity loss and changes in land and soil productivity. (adapted from Commission Communication C(2019) 4490 final)

WORKING PAPER

Climate-related transition risk	Climate-related transition risks are risks that arise from the transition to a low-carbon and climate-resilient economy. They typically include policy risks, legal risks, technology risks, market risks and reputational risks. (adapted from Commission Communication C(2019) 4490 final).
Climate scenario	A climate scenario allows an entity to explore and develop an understanding of how the physical and transition risks of climate change may impact its businesses, strategies, and financial performance over time.
Climate target	A climate target is a specific objective related to GHG emissions reduction containing a target (absolute GHG emissions value and intensity terms), a perimeter (activities and scopes), a target years and a baseline year's emissions.
Consequential approach	Consequential approach estimates the sum of all system-wide changes in GHG emissions or removals occurring because of the product. (WRI 2018)
Cost rate	Cost rate is the factor used to convert non-monetary impacts like tonnes, hectares, m^3 etc. into monetary units. Cost rates should be based on monetary valuation studies, need to be science-based and the methods used to obtain them transparent. Guidance on these methods can be obtained, e.g., from the EU-LIFE-project TRANSPARENT (see recital (38) of the draft CSRD).
Direct GHG emissions (Scope 1)	Direct GHG emissions (Scope 1) are those originating from sources owned or controlled by the undertaking. (adapted from GHG Protocol Corporate Standard)
Energy Attribute Certificate (EAC)	Energy Attribute Certificates (EAC) are a category of contractual instruments that represents certain information (or attributes) about the energy generated. This category includes instruments which may go by several different names, including certificates, tags, credits, or generator declarations [GHG Protocol Scope 2 Guidance]. Most recognized ones are Guarantee of Origin from renewable sources in Europe, Renewable Energy Certificate (REC) in North America or international REC in the rest of the world (iREC).
Financial exposure to climate-related physical risks	Financial exposure to climate-related physical risks refers to the point-in-time estimated proportion in amount or extent of a company's financial position or performance exposed to climate-related hazards.
Financial exposure to climate-related transition risks	Financial exposure to climate-related transition risk refers to the point-in-time estimated proportion in amount or extent of a company's financial position or performance exposed to transition risks.
Global warming potential (GWP)	Global warming potential (GWP) is a factor describing the radiative forcing impact (degree of harm to the atmosphere) of (GWP) one unit of a given GHG relative

WORKING PAPER

to one unit of CO_2. [GHG Protocol Scope 2 Guidance Glossary]

Greenhouse Gases (GHG)

Greenhouse Gases (GHG) are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the Earth's surface, the atmosphere itself and by clouds. This property causes the greenhouse effect. Water vapour (H_2O), carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4) and ozone (O_3) are the primary GHGs in the Earth's atmosphere. Moreover, there are a number of entirely human-made GHGs in the atmosphere, such as the halocarbons and other chlorine- and bromine-containing substances, dealt with under the Montreal Protocol. Beside CO_2, N_2O and CH_4, the Kyoto Protocol deals with the GHGs sulphur hexafluoride (SF_6), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs). (IPCC, 2018: Annex I: Glossary)

High climate impact sectors

High climate impact sectors are those listed in NACE Sections A to H and Section L. (Draft Regulatory Technical Standards with regards to the content and presentation of disclosures pursuant to Article 8(4), 9(6) and 11(5) of Regulation (EU) 2019/2088)

Indirect GHG emissions (Scope 3)

Indirect GHG emissions are a consequence of the operations of the undertaking but occur at sources owned or controlled by another company. This includes Scope 2 and Scope 3 GHG emissions. (adapted from GHG Protocol Corporate Standard)

Internal carbon price

Internal carbon price is a price used by entities to assess the financial implications of changes to investment, production, and consumption patterns, as well as potential technological progress and future emissions abatement costs. (adapted from IFRS Climate Prototype)

Internal carbon pricing scheme

Internal carbon pricing scheme is an organizational arrangement that allows an undertaking to apply carbon prices in strategic and operational decision making. There are two types of internal carbon pricing schemes commonly used by undertakings. The first type is a shadow price, which is a theoretical cost or notional amount that the undertaking does not charge but that can be used in assessing the economic implications or trade-offs for such things as risk impacts, new investments, net present value of projects, and the cost-benefit of various initiatives. The second type is an internal tax or fee, which is a carbon price charged to a business activity, product line, or other operating segment based on its GHG emissions. (adapted from IFRS Climate Prototype)

WORKING PAPER

Key assets	Key assets are owned or controlled, existing or planned assets (such as stationary or mobile installations, facilities, and equipment) that are significant direct and energy indirect GHG emission sources
Location-based method	Location-based method quantifies Scope 2 GHG emissions based on average energy generation emission factors for defined locations, including local, subnational, or national boundaries. (GHG Protocol Scope 2 Guidance Glossary)
Market-based method	Market-based method quantifies Scope 2 GHG emissions based on GHG emissions emitted by the generators from which the reporter contractually purchases electricity bundled with instruments, or unbundled instruments on their own. (GHG Protocol Scope 2 Guidance Glossary)
Monetised GHG emission	Monetised GHG emission means the multiplication of a unit of CO_2eq emission by a pre-defined cost rate.
Monetised impact	Monetised impact refers to the monetary value of an environmental or social impact, caused by or contributed to the undertaking.
Net turnover	Net turnover means the amounts derived from the sale of products and the provision of services after deducting sales rebates and value added tax and other taxes directly linked to turnover. (Art. 2 (5) Directive 2013/34/EU).
Net zero target	A net zero target is a specific GHG emissions reduction target using pathways at the global and sectoral level that are aligned with the remaining global budget to limit global warming to 1.5ºC and achieve net-zero GHG emissions by 2050 and applying those to an undertaking.
Non-renewable energy	Non-renewable energy is the energy which cannot be identified as deriving from renewable sources. [Draft Regulatory Technical Standards with regard to the content and presentation of disclosures pursuant to Article 8(4), 9(6) and 11(5) of Regulation (EU)] Fossil fuels such as oil, natural gas, and coal are examples of non-renewable resources.
Offsets	Carbon offsets are reductions in emissions of carbon dioxide or other greenhouse gases made in order to compensate for an emission made elsewhere.
Operating segments	Operating segments are defined as component of an entity that engages in business activities from which it may earn revenues and incur expenses (IFRS 8)
Physical risks	Risks to the company that arise from the physical effects of climate change. They include acute physical risks and chronic physical risks. (EU Guidelines on reporting climate-related information)

WORKING PAPER

Product operating lifetime	Product operating lifetime is the time interval from when a product is sold to when it is planned to be decommissioned. The product operating lifetime can be an estimation.
Purchased or acquired energy	‘Purchased or acquired’ is used when the undertaking has received the energy from a third party.
Recognised quality standards for carbon offsets	Recognised quality standards for carbon offsets are those that are verifiable by independent third parties, make requirements and project reports publicly available and at a minimum ensure additionality, permanence, avoidance of double counting and rules for calculation, monitoring, and verification of the project’s GHG emissions.
Renewable energy	Renewable energy is the energy taken from sources that are inexhaustible. As such, renewable energy covers wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas. (Art. 2 (1) Directive (EU) 2018/2001)
Renewable hydrogen	Renewable hydrogen is hydrogen produced through the electrolysis of water (in an electrolyser, powered by electricity), and with the electricity stemming from renewable sources. (EU Hydrogen Strategy COM (2020)301 final)
Scenario analysis	A scenario analysis is a process for identifying and assessing a potential range of outcomes of future events under conditions of uncertainty.
Scope 2 GHG emissions	Scope 2 GHG emissions are indirect emissions from the generation of purchased or acquired electricity, steam, heat, or cooling consumed by the undertaking. (adapted from GHG Protocol Scope 2 Guidance Glossary)
Scope 3 category	Scope 3 category is one of the 15 types of Scope 3 emissions identified by the GHG Protocol Corporate Standard and detailed by the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard [adapted from GHG Protocol Scope 3 Accounting and Reporting Standard Glossary]; these 15 categories should be grouped for purpose of simplified presentation as follows: a) upstream purchasing, b) downstream sold products, c) goods transportation, d) travels and e) financial investments: (a) Upstream purchasing includes the GHG protocol categories “purchased goods and services”, “capital goods”, “fuel- and energy-related activities (not included in scope 1 or scope 2)”, “upstream leased assets” and “waste generated in operations”; (b) Downstream sold products comprises “processing of sold products”, “use of sold products”, “End-of-life treatment of sold products”, “Downstream leased assets”, “Franchises”;

WORKING PAPER

(c) Goods transportation comprises "upstream transportation and distribution" and "downstream transportation and distribution";

(d) Travels comprises business travels and employee commuting;

(e) Financial investments reflects the respective GHG Protocol category.

Scope 3 GHG emissions	Scope 3 GHG emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions. [GHG Protocol Scope 3 Accounting and Reporting Standard Glossary]; Scope 3 GHG emissions are considered as estimated emissions in comparison with Scope 1 & 2 as their calculation is based on a combination of methods and primary and secondary data ranging from precise figures (supplier-specific or sites-specific methods) to extrapolated figures (average-data or spend-based methods) (derived from GHG Protocol Scope 3 Calculation Guidance)
Transition risks	Risks to the company that arise from the transition to a low-carbon and climate-resilient economy. They include Policy risks, Legal risks, Technology risks, Market risks and Reputational risks. (EU Guidelines on reporting climate-related information)
Undertakings carbon budget	Undertakings carbon budget is the cumulative amount of GHG emissions expressed in tons of CO_2eq available over a defined period of time (e.g., until 2030 and or 2050) to achieve the 1.5°C climate mitigation target; of the undertaking.

WORKING PAPER

Appendix B: Application Guidance

The provisions of this appendix shall be applied in conjunction with the [draft] Disclosure Requirements defined in paragraphs 1 to 97.

This appendix describes how to apply the Disclosure Requirements, has the same authority as the Disclosure Requirements and is an integral part of the proposed [draft] ESRS E1 Climate change.

Strategy and business model, governance and organisation, Impacts, risks and opportunities

Additional climate-related disclosures for the implementation of ESRS 2 Strategy and business model

[Disclosure Requirement 1] – Transition plan in line with the Paris Agreement

AG2. When disclosing its transition plan, the undertaking is expected to provide a high-level explanation on how it will adjust its strategy and business model to ensure compatibility with the transition to a climate-neutral economy and with limiting of global warming to 1.5°C in line with the Paris Agreement. The undertaking shall, where applicable, refer to and contextualise information presented under other disclosures requirements of this [draft] standard.

AG3. When disclosing the information required under paragraph 20 (d), the undertaking shall include:

(a) the cumulative locked-in GHG emissions associated with key assets from the reporting year until 2030 and 2050 in tCO_2eq, calculated as the sum of estimated Scope 1 and 2 GHG emissions of active and planned key assets over their operating lifetime;

(b) the cumulative locked-in GHG emissions associated with the direct use-phase GHG emissions of sold products in tCO_2eq, calculated as the sales volume of products in the reporting year multiplied by the estimated direct use-phase GHG emissions of over their expected lifetime;

(c) assumptions made for the calculation of the locked-in GHG emissions from key assets and products;

(d) an explanation on if and how the locked-in GHG emission can jeopardise the achievement of GHG emission reduction targets and drive transition risk; if available, a comparison of the locked-in emissions against the undertaking's GHG emission budget derived from a science-based target;

(e) an explanation of the plans to manage, i.e. to transform, decommission or phase-out, GHG- and energy-intensive assets and products.

AG4. When disclosing the information required under paragraph 20 (e), the undertaking shall make a reference to the information disclosed with regards to Art. 8 of the Taxonomy Regulation by explaining how the alignment of its economic activities with the provisions of the Delegated Act (EU) 2021/2139 supports its transition to a climate-neutral economy and net-zero CO_2 emissions.

AG5. When disclosing the information required under paragraph 20 (f), the undertaking shall explain how its strategy for quantitative and qualitative business development interacts with the achievability of its transition plan and GHG emission reduction targets.

AG6. The undertaking may support the presentation of the information as appropriate by summarising graphs or tables e.g. as a roadmap made towards net-zero CO_2 emissions or by comparing its locked-in emissions to a carbon budget derived from its GHG reduction targets.

WORKING PAPER

[Disclosure Requirement 2] - Resilience of the strategy and business model to principal climate-related transition and physical risks

AG7. When disclosing the information required under paragraph 23 (a), the undertaking shall explain the scope of the analysis, including but not limited to:

(a) if the analysis relates to the whole undertaking or part of it, such as specific business models, subsidiaries, business units or sites, and, if applicable, which own operations it has excluded and why;

(b) which up- and downstream activities in the value chain it has covered in the analysis or why value chain considerations where excluded.

(c) by reference to Disclosure Requirement 5, which principal climate-related risks and opportunities (transition and physical) are covered by the resilience analysis and, if applicable, which principal climate-related risks and opportunities it has excluded and why.

AG8. When disclosing the information required under paragraph 23 (b), the undertaking may directly reference the information disclosed under paragraph 30 (b) and (c) in conjunction with AG 19, if the climate scenarios considered for the analysis of the resilience are the same as those considered to identify and assess its principal climate-related transition and physical risks.

AG9. When disclosing the information required under paragraph 23 (c), the undertaking shall explain the results of the analysis to determine the resilience of its strategy and business models, including but not limited to:

(a) implications of the scenarios considered for the undertaking's strategy (e.g. demand shifts) and operational changes that may be required (e.g., changes to energy sources, technology deployment, feedstocks or raw materials, reskilling of workforce or, in case of physical climate-related risks the reallocation, decommissioning, repairment or update of assets);

(b) by reference to Disclosure Requirement 21 and 22, an assessment demonstrating how the undertaking's financial position and financial performance supports the resilience of its strategy and business model over the short, medium and long term.

Additional climate-related disclosures for the implementation of ESRS 3 Governance and organisation

[Disclosure Requirement 3] – Climate-related targets and performance indicators in relation to compensation schemes

AG10. Nil.

[Disclosure Requirement 4] –Internal carbon pricing schemes

AG11. The information required by paragraph 29 may be presented by using the following table:

Internal carbon pricing	Volume at stake (tCO_2eq)	Prices applied (€/tCO_2eq)	Perimeter description
CapEx shadow price			
R&D investment shadow price			

WORKING PAPER

Internal carbon fee/fund (internal fee transfer from high emitting entities to low carbon projects)			
Carbon prices assumptions			
Other			

Additional climate-related disclosures for the implementation of ESRS 4 Impacts, risks and opportunities

[Disclosure Requirement 5] – Processes to identify material climate-related impacts, risks and opportunities

AG12. When disclosing the information required under paragraph 30 (a), the undertaking shall describe its processes and applied methodologies to identify its impacts on climate including:

(a) the methodologies to screen its activities in order to identify its actual and potential GHG emission sources in its own activities and along the value chain;

(b) how it has calculated its GHG emissions by reference to Disclosure Requirements 13 to 16 on GHG emissions;

(c) how it has assessed the materiality of the actual and potential impacts on climate change based on severity (scale, scope, remediability) and likelihood criteria and whether these impacts have been prioritised and monitored by the undertaking's highest governing bodies due to their importance to the undertaking.

AG13. When disclosing the information required under paragraph 30 (b), the undertaking shall explain whether and how it has identified its principal physical climate risks including:

(a) the methodologies to screen the activities to identify which physical climate risks from the list of the classification of climate-related hazards (see table below), and based at least on a worst-case climate scenario analysis, may impact the assets and activities in its own operations and in the value chain during their expected lifetime;

(b) where the activity is identified as being impacted by one or more of the physical climate hazards listed, a vulnerability assessment of the undertaking's activities shall be conducted to assess the materiality of the negative physical impacts on the financial position and performance of the undertaking;

(c) the description of adaptation solutions that can reduce the identified physical climate risks, as referred to under Disclosure Requirements 7 to 10 related to the implementation of adaptation policies, action plans and resources.

Table X: Taxonomy Regulation classification of climate-related hazards

	Temperature-related	Wind-related	Water-related	Solid mass-related
Chronic	Changing temperature (air, freshwater, marine water)	Changing wind patterns	Changing precipitation patterns	Coastal erosion

WORKING PAPER

			and types (rain, hail, snow/ice)	
	Heat stress		Precipitation or hydrological variability	Soil degradation
	Temperature variability		Ocean acidification	Soil erosion
	Permafrost thawing		Saline intrusion	Solifluction
			Sea level rise	
			Water stress	
Acute	Heat wave	Cyclone, hurricane, typhoon	Drought	Avalanche
	Cold wave/frost	Storm (including blizzards, dust, and sandstorms)	Heavy precipitation (rain, hail, snow/ice)	Landslide
	Wildfire	Tornado	Flood (coastal, fluvial, pluvial, ground water)	Subsidence
			Glacial lake outburst	

AG14. The screening of activities required in paragraph AG12. (a) shall cover a description of whether and how it has:

(a) analysed the potential climate-related hazards using different climate scenarios and at least a worst-case scenario, notably based on IPCC scenario RCP 8.5 over a period consistent with the expected lifetime of the activities and assets and with which geographic area grid precision;

(b) covered own operations and the value chain (own assets, suppliers and potentially clients' activities) and mapped their geographical locations with potential climate-related hazards to identify critical assets and activities which may be exposed to physical climate hazards;

(c) mapped the geographical location of owned assets and of supply chains towards geographical representation of the worst-case scenario to identify activities and assets' locations at risk;

(d) analysed hazards through their likelihood, magnitude, and duration.

AG15. When explaining the assessment of the undertaking's vulnerability to physical risks mentioned in AG12. (b), the undertaking shall describe whether and how it has listed its assets and activities and assessed the likelihood, magnitude and duration of events (e.g. disruptions, scarcity of water, climate-sensitive materials, geographic concentration of suppliers/ cluster tendency, increased cost of supplies due to scarcity, weather sensitivity of production and operation process, physical damage to assets, loss of revenue due to failed delivery or service disruption; etc.) according to own methodologies depending on the undertaking's industry and organisation specific climate-related risk management as the maturity of these methodologies is still limited.

AG16. The undertaking may use the table below to present the information required.

TCFD categorisation of climate-related physical risks	Description of the undertaking's processes to assess the materiality of climate-related physical risks E.g.; use of climate-related scenario; mapping of the geographical location of	Description of the undertaking's material climate-related physical risks

WORKING PAPER

	business activities; analysis of the likelihood, magnitude and duration of hazards	
Acute		
Increased severity of extreme weather events such as cyclones and floods		
Chronic		
Changes in precipitation patterns		
Extreme variability in weather		
Rising mean temperatures		
Rising sea level		

WORKING

AG17. When disclosing the information required under paragraph 30 (c), the undertaking shall describe whether and how it has:

(a) screened transition risk events (see table below) informed by climate-related scenario analysis consistent with the Paris Agreement, for example based on scenarios of the International Energy Agency (Net zero Emissions by 2050, Sustainable Development Scenario, etc.);

(b) mapped the activities through the lens of transition risk events taking into consideration their likelihood, magnitude and duration according to selected scenario analyses and by using most material events (e.g. increased pricing of GHG emissions, regulation of existing products and services, exposure to litigation; substitution of existing products and services with lower emissions options, unsuccessful investment in new technologies, costs to transition to lower emissions technology, increased cost of raw materials; shifts in consumer preferences);

(c) assessed the materiality of the actual and potential climate-related transition risks on the financial position and performance of the undertaking based on severity (scale, scope, remediability) and likelihood criteria and whether these impacts have been prioritised and are monitored directly by the undertaking's highest governing bodies due to their importance to the undertaking.

AG18. The undertaking may use the table below to present the information required.

TCFD categorisation of climate-related transition risks	Description of the undertaking's processes to assess the materiality of climate-related transition risks E.g.; use of climate-related scenario; screening of the harmful activities to climate change mitigation; analysis of the	Description of the undertaking's material climate-related transition risks

	likelihood, magnitude and duration of transition risk events	
Policy and legal		
Increased pricing of GHG emissions		
Enhanced emissions-reporting obligations		
Mandates on and regulation of existing products and services		
Exposure to litigation		
Technology		
Substitution of existing products and services with lower emissions options		
Unsuccessful investment in new technologies		
Costs to transition to lower emissions technology		
Market		
Changing customer behavior		
Uncertainty in market signals		
Increased cost of raw materials		
Reputation		
Shifts in consumer preferences		
Stigmatization of sector		
Increased stakeholder concern		

Negative stakeholder feedback		

AG19. When disclosing the information required under paragraph 30 (b) and (c), the undertaking shall explain how it has used climate-related scenario analysis to inform the identification and assessment of its principal physical and transition risks over the short, medium- and long-term, including:

(a) which scenarios were used and the sources of the scenarios;

(b) narrative, time horizon, and endpoints used with a discussion of why it believes the range of scenarios used covers its plausible risks and uncertainties;

(c) the key forces and drivers taken into consideration in each scenario and why they are relevant to the undertaking, such as policy assumptions, macroeconomic trends, energy usage and mix, and technology assumptions;

(d) key inputs and constraints of the scenarios, including their level of detail (e.g. whether the analysis of physical climate-related risks is based on geospatial coordinates specific to the undertaking's locations or national- or regional-level broad data).

AG20. Regarding the use of climate-related scenario analysis for the identification of transition risks, the undertaking shall in particular explain whether and how:

(a) it has at least considered a 1.5°C and 2°C scenario;

(b) the analysis is compatible with the time horizons of national, EU or and international climate goals, including at least the years 2030 and 2050.

AG21. Regarding the use of climate-related scenario analysis for the identification of physical risks, the undertaking shall in particular explain whether and how:

(a) it has considered scenarios consistent with increased projected physical impacts from climate change, such as IPCC scenario RCP 8.5 or relevant regional scenarios;

(b) the analysis relates to its capital planning and investment horizons and the useful life of its key assets.

AG22. The undertaking may consider the TCFD Technical Supplement on "The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities" (2017). Non-financial undertakings may consider in addition the TCFD "Guidance on Scenario Analysis for Non-Financial Companies" (2020).

Disclosure Requirement 6] – Material climate-related impacts, risks and opportunities

AG23. When disclosing the information required under paragraph 32 (a), the undertaking shall, by reference to Disclosure Requirements 7 to 10 of this Standard, explain the significant GHG emission sources in its own operations and its value chain and, if any, include further significant non-GHG emission climate impacts, such as emissions of black carbon or tropospheric ozone or land use changes.

AG24. When disclosing the information required under paragraph 32 (b), the undertaking shall disclose the result of the assessment of its climate-related physical risks and vulnerability and consider the Taxonomy DNSH adaptation criteria and TCFD risk categorisation.

AG25. When disclosing the information required under paragraph 32 (c), the undertaking shall disclose the result of the assessment of its climate-related transition risks and consider the Taxonomy DNSH mitigation criteria and TCFD risk categorisation.

Policies, targets, action plans and resources

WORKING PAPER

AG26. The Disclosure Requirements developed hereafter refer to ESRS 5 Definitions for policies, targets, action plans and resources.

[Disclosure Requirement 7] – Policies implemented to manage climate change mitigation and climate change adaptation

AG27. Policies related to climate change mitigation and adaptation shall be disclosed separately as their goals, people involved, actions and resources needed to implement them are different. The disclosure of the undertaking's climate change mitigation policy relates to the reduction of GHG emissions through different decarbonisation levers and specific actions (investments in electrification, energy efficiency, renewable energy deployment or low-carbon product development). The undertaking's policies for climate change adaptation relate to managing the undertaking's climate-related physical and transition risks and vulnerability.

[Disclosure Requirement 8] – Measurable targets for climate change mitigation and adaptation

Calculation rules and principles

AG28. When disclosing information under paragraph 41, the undertaking shall disclose all climate-related targets it has adopted that are material to understand its plans to reduce climate-related impacts, in particular its Scope 1, 2 and 3 GHG emissions, its overall transition plan and its plans to address principal climate-related transition and physical risks and opportunities.

AG29. The requirements in paragraph 41 items (a) to (h) apply to all climate-related targets an undertaking discloses. Additional requirements for the disclosure of GHG emission reduction targets are specified in paragraphs 42 respectively. If the undertaking has not yet adopted or does not intend to adopt climate-related targets and GHG reduction targets in particular, it shall follow the requirements under paragraph 43.

AG30. When disclosing the information required under paragraph 41 (a), the undertaking shall specify for each target, the type, what it intends to achieve and how it is embedded in the undertakings climate change mitigation policy, climate change adaptation policy or other policies (e.g. remuneration policies, investment policies, supply chain policies etc.). The undertaking shall explain how the targets are related to other information disclosed under this standard.

AG31. When disclosing the information required under paragraph 41 (b), the undertaking shall in particular explain the boundaries of the target, i.e. whether it relates to the whole undertaking or specific subsidiaries, sites, countries or activities and whether it is limited to own operations or also including (parts of) the value chain. When disclosing GHG emissions reduction targets, the undertaking shall explain how they ensure consistency with the GHG inventory boundaries for its disclosed Scope 1, 2 and 3 GHG emissions under Disclosure Requirements 13-16. If the GHG emission reduction target is not consistent with the GHG inventory, the undertaking shall disclose the percentage of the GHG emissions (Scope 1, 2, 3 and total) covered by the target.

AG32. When disclosing the information required under paragraph 41 (c), the undertaking shall briefly explain how it has ensured that the baseline value, against which the progress towards the target is measured, is representative in terms of activities covered or influences from external factors (e.g. temperature anomalies in a certain year influencing the amount of energy consumption and related GHG emissions), for example by the use of concepts such as normalisation. The undertaking may disclose a base year that is derived from a three-year average if this increases representativeness and allows a more faithful representation.

WORKING PAPER

AG33. To improve comparability, when setting new targets, the undertaking shall select a recent base year preceding the first reporting year of the new target period by a maximum of 3 years. For example, for 2030 as the target year and a target period between 2025 and 2030, the base year shall be selected between 2022 and 2025.

AG34. The baseline value and year shall not be changed unless significant scope changes occur. In such case, the undertaking shall explain how the new baseline value affects the target, its achievement and presentation of progress over time. From 2025, the undertaking may update its base year in relation to the target years in five-year rolling periods. For instance, for the target year 2030 the base year would be 2025; in 2030 the new target year would 2035 and achievement is measured against the baseline value from 2030 etc.

AG35. When disclosing the information required under paragraph 41 (d) the undertaking shall include:

(a) whether the target is short, medium or long term, where short-term relates to 1-5 years from the reporting year, medium-term to 5-10 years and long-term to >10 years, but no later than 2050;

(b) the target and milestone years and the respective end or interim target values to be achieved;

(c) an explanation how the targets relate to national, EU or international climate change mitigation or adaptation policy targets, if applicable;

AG36. When disclosing the information required under paragraph 41 (e) the undertaking shall explain how it has developed the target, including a brief description of critical assumptions and applied methodologies. For GHG emission reduction targets, in particular, the undertaking shall disclose:

(a) whether the target is science-based and the applied approach (e.g. sectoral decarbonisation or absolute contraction);

(b) whether the undertaking has used a diverse range of climate scenarios, at least including a 1.5°C and a 2°C scenario, to determine the target;

(c) which scenarios were used (name, reference date, provider) and critical assumptions made;

(d) critical assumptions relating to its future activities (e.g. sales volumes, customer preference and demand, regulatory factors) and new technologies and how these may increase or decrease potential GHG emissions.

AG37. When disclosing the information required under paragraph 41 (f) the undertaking shall specify what changes were made and why they were made (e.g., due to a recalculation of the base year inventory, an update to the emissions scenario, a significant perimeter change, etc.).

AG38. When compiling the information required under paragraph 41 (g) for GHG emissions reduction targets, the undertaking shall not count removals, carbon offsets or avoided emissions as means to achieve these targets.

AG39. When disclosing the information required under paragraph 42 (a), the undertaking shall explain:

(a) by reference to its climate change mitigation action plan, the decarbonisation levers and planned and foreseeable key actions it expects to significantly contribute to the achievement of its short-, medium and long-term GHG emission reduction targets (Scope 1, 2 and 3);

(b) whether it plans to adopt new technologies and the role of these to achieve its GHG emission reduction targets and net-zero CO_2 emissions;

(c) the progress made over time;

(d) whether and how it has considered a diverse range of climate scenarios, at least including a 1.5°C and 2°C scenario, in order to detect relevant environmental-,

WORKING PAPER

societal-, technology-, market- and policy-related developments and determine its decarbonisation levers.

AG40. When disclosing the information required under paragraph 42 (b), the undertaking shall include the target and interim targets for its Scope 1, 2 and 3 GHG emissions in absolute value and, if deemed meaningful, in intensity value. Guidance on intensity targets will be available from sector-specific ESRS. The undertaking shall disclose targets for every five years from 2025 onwards but shall at least disclose values for 2030 and 2050.

AG41. To foster comparability and acknowledge past progress made, the undertaking may disclose past GHG emission reductions. In doing so, the undertaking shall ensure that the information is consistent with the requirements of this standard and explain possible methodological differences, among others regarding baseline GHG emissions and perimeter of activities covered.

AG42. When disclosing a net zero target, the undertaking shall specify the methodology and frameworks applied, to which scopes the target applies and how the residual GHG emissions are intended to be neutralised, e.g. by permanent removal and storage of carbon.

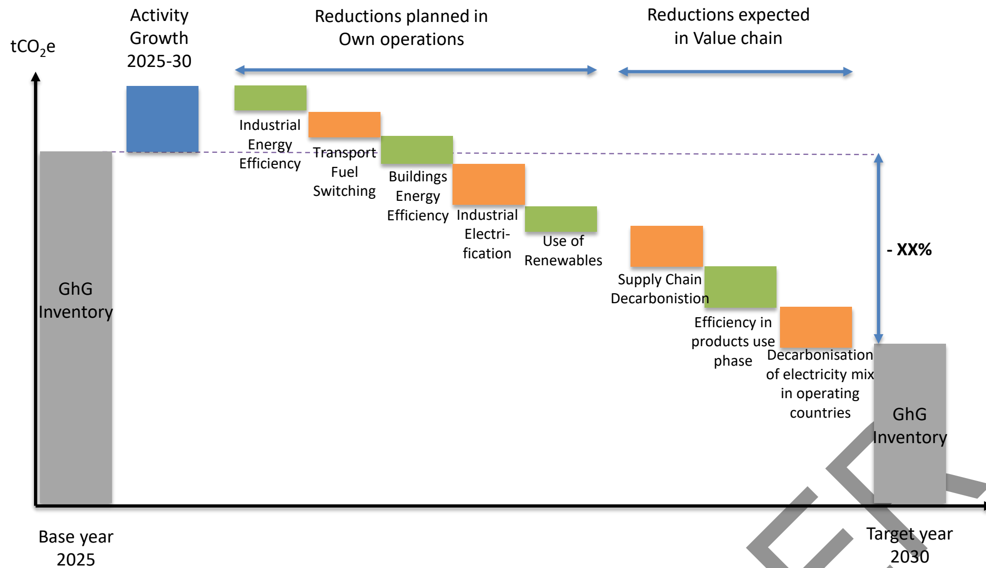
AG43. When disclosing a net zero target the undertaking shall consider the Science-based target initiative (SBTi) corporate net-zero standard (version 1.0, October 2021).

AG44. GHG emissions reduction targets may be presented as a table showing the different decarbonisation levers, such as the following:

PAPER

	Base year total emissions	Target value and contribution of decarbonisation levers (% and tCO_2eq)		
		2025	2030	Up to 2050
GHG emissions reduction targets pathway (Scope 1, 2 & 3)				
Decarbonisation lever example: Industrial Energy Efficiency	n/a			
Decarbonisation lever example: Building Energy Efficiency	n/a			
Decarbonisation lever example: Fuel Switching	n/a			
Decarbonisation lever example: Electrification	n/a			
Decarbonisation lever example: Use of renewable energy	n/a			
Decarbonisation lever example: CCU and CCS technologies	n/a			

AG45. GHG emissions reduction targets may be presented as a graphical pathway or trajectory over time, including the contribution of different decarbonisation levers to target achievement.



Connectivity with financial reporting

AG46. When disclosing the information required under paragraph AG28., the undertaking shall include a statement of consistency illustrating how the scenarios and critical assumptions made for the financial statements and the sustainability statements are consistent.

AG47. The statement of consistency required under paragraph AG45. shall include a reference to the relevant paragraphs of the financial statements. When the assumptions are not consistent, the statement of consistency shall state that fact and explain the reason.

[Disclosure Requirements 9 & 10] – Climate change mitigation and adaptation action plans & resources

AG48. Key actions undertaken to implement a climate change mitigation or adaptation policy shall be disclosed in single or separated action plan(s). The action plan has a retrospective component, including key actions accomplished during the reporting period, and a forward-looking component, including key actions planned in the short-, medium- and long-term.

AG49. Information on resources needed and allocated may be disclosed at the level of the entire action plan or by key action taken or planned.

AG50. The information on resources allocation shall be presented in the form of a table and be broken down between capital expenditures and operating expenditures, and across the relevant time horizons, at minimum for the current reporting year resources, and the planned allocation of resources over specific time horizons.

AG51. Where the action plan requires significant capital expenditures the undertaking shall report such information, in particular if it implies the adoption of new technologies, R&D, refurbishment or replacement of key assets (e.g., to address locked-in emissions as part of its transition plan). The undertaking shall at least make a reference to the disclosure of its CapEx plan for taxonomy alignment. Where the ability to implement the action plan does not depend on specific capital expenditures, the undertaking shall provide explanatory information instead.

AG52. The amounts of capital expenditure shall be consistent with the Taxonomy Regulation related key performance indicator and the CapEx plan. The undertaking may structure its action plan to accommodate the CapEx plan for taxonomy alignment. In case of differences between capital and operating expenditure disclosed under this standard and the EU taxonomy, the undertaking shall provide an explanation.

AG53. If the undertaking has not yet defined specific actions because it is in a process of devising a policy, the process and its current implementation status shall be reported instead.

WORKING PAPER

Performance measurement

[Disclosure Requirement 11] – Energy consumption & mix

AG54. The transition to a climate-neutral European Union necessitates urgent action to increase energy efficiency and reduce absolute energy consumption in buildings, transport and industrial processes, among others, as well as to increase the share of renewable energy in the overall energy mix.

Calculation rules

AG55. When compiling the information required under paragraph 53, the undertaking shall:

(a) only report energy consumed from processes owned or controlled by the undertaking applying the same perimeter as for reporting on GHG emissions Scope 1 and 2;

(b) provide the required information for the reporting year;

(c) exclude feedstocks and fuels that are not combusted for energy purposes. The Undertaking that consumes fuel as feedstocks can disclose information on this consumption separate from the required disclosures;

(d) ensure all quantitative energy-related information is reported in Mega-Watt-hours (MWh) in Lower Heating Value or net calorific value. If raw data is available in energy units other than MWh, such as Giga-Joules (GJ) or British Thermal Units (Btu), in volume units, such as cubic feet or gallons, or in mass units, such as kilograms (kg) or pounds (lb), it shall be converted to MWh using suitable conversion factors (see for example the Annex II of the Fifth Assessment report of IPCC). Conversion factors for fuels shall be made transparent and applied in a consistent manner.

(e) ensure all quantitative energy-related information is reported as final energy consumption, referring to the amount of energy the undertaking actually consumes using for example the table in Annex IV of the EU Directive 2012/27 on energy efficiency.

(f) avoid double counting of fuel consumption when disclosing self-generated energy consumption. If the undertaking generates electricity from a non-renewable or renewable fuel source and then consumes the generated electricity, the energy consumption shall be counted only once under fuel consumption;

(g) not offset energy consumption even if onsite generated energy is sold to and used by a third party;

(h) not count energy that is sourced from within the organisational boundary under "purchased or acquired" energy;

(i) account for steam, heat or cooling received as 'waste energy' from a third party's industrial processes under "purchased or acquired" energy;

(j) account for renewable hydrogen as a renewable fuel. Hydrogen that is not completely derived from renewable sources shall be included under "fuel consumption from other non-renewable sources".

(k) adopt a conservative approach when splitting the electricity, steam, heat or cooling between renewable and non-renewable sources based on the approach to calculate market-based Scope 2 emissions. The undertaking shall only consider these energy consumptions as deriving from renewable sources if the origin of the purchased energy is clearly defined in the contractual arrangements with its suppliers (renewable PPA, standardised green electricity tariff, market instruments like Guarantee of Origin from renewable sources in Europe or similar instruments like Renewable Energy Certificates in the US and Canada, etc.).

WORKING PAPER

AG56. The Disclosure Requirement shall be presented following the table below.

Energy consumption and mix	Comparative	Year N
Fuel consumption from coal and coal products (MWh) (1)		
Fuel consumption from crude oil and petroleum products (MWh) (2)		
Fuel consumption from natural gas (MWh) (3)		
Fuel consumption from other non-renewable sources (MWh) (4)		
Consumption from nuclear products (MWh) (5)		
Consumption of purchased or acquired electricity, heat, steam, and cooling from non-renewable sources (MWh) (6)		
Total non-renewable energy consumption (MWh) (7) **(calculated as sum of lines 1 to 6)**		
Share of non-renewable sources in total energy consumption (%)		
Fuel consumption for renewable sources (including biomass, biogas, non-fossil fuel waste, renewable hydrogen, etc.) (MWh) (8)		
Consumption of purchased or acquired electricity, heat, steam, and cooling from renewable sources (MWh) (9)		
The consumption of self-generated non-fuel renewable energy (MWh) (10)		
Total renewable energy consumption (MWh) (11) **(calculated as sum of lines 8 to 10)**		
Share of renewable sources in total energy consumption (%)		
Total energy consumption (MWh) **(calculated as sum of lines 7 and 11)**		

AG57. The total energy consumption broken down between renewable and non-renewable energy consumption can be graphically presented in the sustainability statement, showing developments over time (e.g., in a bar chart).

AG58. If the undertaking has set energy reduction or energy efficiency targets that relate to its total energy consumption or total renewable energy consumption, it may include them in the graphical presentation of the total energy consumption.

[Disclosure Requirement 12] – Energy intensity per revenue

Calculation rules

AG59. When compiling the information required under paragraph 54, the undertaking shall:

(a) calculate the energy intensity ratio by the following formula: $\frac{\text{Total energy consumption from activities in high climate impact sectors (MWh)}}{\text{Net turnover from activities in high climate impact sectors (Monetary unit)}}$;

(b) express the total energy consumption in MWh and the net turnover in monetary unit (e.g., million Euros);

(c) include in the numerator and denominator only the fraction of the total final energy consumption and net turnover that can be associated with activities in high climate impact sectors;

(d) calculate the total energy consumption in line with Disclosure Requirement 11;

(e) calculate the net turnover in line with the accounting principles applicable for financial statements.

AG60. The quantitative information shall be presented in the following table.

Energy intensity per revenue	Comparative	N	% N / N-1
Total energy consumption from activities in high climate impact sectors per net turnover from activities in high climate impact sectors (MWh/Monetary unit)			

Connectivity with financial reporting

AG61. For the net turnover, the reconciliation to the most relevant amount presented in the financial statements shall be structured as follows:

(a) The undertaking shall include a cross-reference to the related line item in the financial statement.

(b) If the net turnover cannot be directly cross-referenced to a line item in the financial statement, the undertaking shall provide a quantitative reconciliation table between the net turnover per this ESRS E1 and the financial statements. The undertaking may use the table for reconciliation shown below:

Turnover from activities in high climate impact sectors (Disclosure Requirement 12 “Energy intensity”)	
Turnover (other)	
Total turnover (Financial statements)	

[Disclosure Requirements 13, 14, 15 & 16] – GHG emissions

Calculation rules

WORKING PAPER

AG62. When compiling the information for reporting of GHG emissions according to Disclosure Requirements 13, 14, 15 and 16 the undertaking shall:

(a) consider the principles, requirements and guidance provided by the GHG Protocol Corporate Standard (version 2004) and GRI 305 (version 2016);

(b) [disclose and consistently apply the chosen consolidation approach; whether equity share, financial control, or operational control and any further assumption and sources taken to determine its GHG emissions] [use the operational control consolidation approach] [use the financial control consolidation approach];

(c) include emissions of CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3;

(d) use the most recent GWP values published by the IPCC based on a 100-year time horizon to calculate CO_2 equivalent emissions of non-CO_2 gases;

(e) report on the methodologies and emissions factors used to calculate or measure GHG emissions, providing a reference or link to any calculation tools used.

AG63. When compiling the information required under paragraph 61 (a) for gross Scope 1 GHG emissions, the undertaking shall:

(a) calculate or measure GHG emissions from stationary combustion, mobile combustion, process emissions and fugitive emissions;

(b) use suitable activity data that, amongst others, include the non-renewable fuel consumption;

(c) use suitable and consistent emission factors;

(d) disclose biogenic emissions of CO_2 from the combustion or biodegradation of biomass separately from the Scope 1 GHG emissions. Include emissions of other types of GHG (such as CH_4 and N_2O), and emissions of CO_2 that occur in the life cycle of biomass other than from combustion or biodegradation (such as GHG emissions from processing or transporting biomass) in Scope 1;

(e) exclude any purchased, sold or transferred GHG emission offsets or allowances.

AG64. When compiling the information required under paragraph 61 (b) for the share of Scope 1 GHG emissions under regulated emission trading schemes, the undertaking shall:

(a) consider GHG emissions from installations it operates and that are subject to regulated European Emission Trading Scheme (EU-ETS), national ETS and non-EU ETS, if applicable;

(b) do not include other emissions than those of CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3;

(c) ensure consistency with the chosen consolidation approach;

(d) ensure the same accounting period for gross Scope 1 GHG emissions and GHG emissions regulated under EU and national ETS;

(e) calculate the share by using the following formula:

$$\frac{\text{GHG emissions from EU ETS installations (t } CO_2\text{eq)} + \text{GHG emissions from national ETS installations (t } CO_2\text{eq)}}{\text{Scope 1 GHG emissions (t } CO_2\text{eq)}}$$

AG65. When compiling the information required under paragraph 64 for gross Scope 2 GHG emissions, the undertaking shall:

(a) consider the principles and provisions of the GHG Protocol Scope 2 Guidance (version 2015);

(b) include purchased or acquired electricity, steam, heat, and cooling;

(c) avoid double counting with GHG emissions reported under Scope 1 or 3;

(d) apply the location-based and market-based method to calculate Scope 2 GHG emissions;

WORKING PAPER

(e) disclose biogenic emissions of CO_2 from the combustion or biodegradation of biomass separately from the Scope 2 GHG emissions, include emissions of other types of GHG (such as CH_4 and N_2O), and emissions of CO_2 that occur in the life cycle of biomass other than from combustion or biodegradation (such as GHG emissions from processing or transporting biomass) in Scope 2;

(f) exclude any purchased, sold or transferred GHG emission offsets or allowances from the calculation of Scope 2 GHG emissions;

(g) adhere to the rules as set out in chapter 7.1 of the GHG Protocol Scope 2 Guidance (version 2015) and disclose the required information accordingly.

AG66. When compiling the information required under paragraph 67 for gross Scope 3 GHG emissions, the undertaking shall:

(a) consider the principles and provisions of the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Version 2011);

(b) if it is a financial institution, consider the GHG Accounting and Reporting Standard for the Financial Industry from the Partnership for Carbon Accounting Financial (PCAF);

(c) screen its total Scope 3 GHG emissions based on the 15 Scope 3 categories identified by the GHG Protocol Corporate and Scope 3 Standards using appropriate estimates;

(d) identify its significant Scope 3 categories based on their estimated GHG emissions following the criteria provided by GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Version 2011, p. 63) or ISO 14064-1:2018 Annex H.3;

(e) calculate or estimate GHG emissions in significant Scope 3 categories;

(f) at least update the Scope 3 inventory every three years and in case of major changes (Explanatory note: Scope 3 GHG emissions need to be disclosed every year, but a full inventory update is only expected every three years unless major changes occur);

(g) disclose the percentage of emissions calculated using primary data obtained from suppliers or other value chain partners;

(h) disclose for each significant Scope 3 GHG emissions category: the boundaries considered, the calculation methods for estimating the GHG emissions as well as if and which calculation tools were applied.

(i) avoid double counting with GHG emissions reported under Scope 1 or 2;

(j) disclose a list of Scope 3 categories included in and excluded from the inventory;

(k) disclose a justification for excluded Scope 3 categories;

(l) disclose biogenic emissions of CO_2 from the combustion or biodegradation of biomass that occur in its value chain separately from the gross Scope 3 GHG emissions, include emissions of other types of GHG (such as CH_4 and N_2O), and emissions of CO_2 that occur in the life cycle of biomass other than from combustion or biodegradation (such as GHG emissions from processing or transporting biomass) in scope 3;

(m) exclude any purchased, sold or transferred GHG emission offsets or allowances from the calculation of Scope 3 GHG emissions.

AG67. When compiling the information required under paragraph 70 for the total GHG emissions, the undertaking shall:

(a) apply the following formulas to calculate the total GHG emissions:

$$\text{Total GHG emissions}_{location-based}\ (\text{t CO}_2\text{eq}) = \text{Gross Scope 1} + \text{Gross Scope 2}_{location-based} + \text{Gross Scope 3}$$

$$\text{Total GHG emissions}_{market-based}\ (\text{t CO}_2\text{eq}) = \text{Gross Scope 1} + \text{Gross Scope 2}_{market-based} + \text{Gross Scope 3}$$

(b) disclose total GHG emissions under the location-based method for Scope 2 GHG emissions and under the market-based method

WORKING PAPER

AG68. The quantitative information shall be presented according to the table below.

	Retrospective				Milestones and target years		
	Base year	Comparative	N	% N / N-1	2025	2030	Annual % target / Base year
Scope 1 emissions							
Gross Scope 1 GHG emissions (tCO_2eq)							
Share of Scope 1 GHG emissions under regulated emission trading schemes (%)							
Scope 2 GHG emissions							
Gross location-based Scope 2 GHG emissions (tCO_2eq)							
Gross market-based Scope 2 GHG emissions (tCO_2eq)							
Scope 3 GHG emissions							
Total Gross indirect (Scope 3) GHG emissions (tCO_2eq)							
Upstream purchasing							
Downstream sold products							
Goods transportation							
Travels							
Financial investments							
Total GHG emissions							
Total GHG emissions (location-based) (tCO_2eq)							
Total GHG emissions (market-based) (tCO_2eq)							

AG69. The Scope 3 GHG emissions shall be presented by significant overarching Scope 3 categories as shown in the above table to highlight the major sources of emissions in the value chain.

AG70. The total GHG emissions shall be disclosed broken down by major countries (to highlight potential transition risks; Scope 3 GHG emissions can be excluded if data is not readily available). The number of countries used in the breakdown shall rely on the amount of

the undertaking's emissions in these countries in order to provide a faithful overview of where the emissions of the undertaking occur.

AG71. The total GHG emissions shall be disclosed broken down by Operating Segments the undertaking is active in. Scope 3 GHG emissions may be excluded if data is not readily available.

AG72. The total GHG emissions, broken down by Scope 1, 2 and 3 GHG emissions, can be graphically presented in the sustainability statement (e.g., as a bar or pie chart) showing the split of GHG emissions over the value chain (Upstream, Own operations, Transport, Downstream).

[Optional Disclosure Requirement 17] – GHG removals

AG73. In addition to their GHG inventories, undertakings may provide transparency on how and to which extent they enhance natural sinks or apply technical solutions to remove GHGs from the atmosphere. While generally agreed concepts and methodologies for accounting of GHG removals are still missing, this Standard allows an undertaking to disclose efforts to remove GHGs from the atmosphere in its own operations and its value chain.

Calculation rules

AG74. When compiling the information required under paragraphs 71 and 73, the undertaking shall:

(a) consider, as far as applicable, the GHG Protocol Corporate Standard (version 2004), Product Standard (version 2011), Agriculture Guidance (version 2014), Land use, land use change, and forestry Guidance for GHG project accounting (version 2006);

(b) apply consensus methods on accounting for GHG removals as soon as they are available;

(c) consider removals from operations that it owns or controls and/or removals in its value chain; removals from own operations and from the value chain shall be disclosed separately;

(d) in case different types of GHG removals exist, add them up to derive the total GHG removals in metric tons of CO_2 or CO_2 equivalent;

(e) if applicable, explain the role of removals for its climate mitigation policy;

(f) describe the nature of all removals included in the disclosure, especially the GHGs concerned, if the removals are nature-based, geological or hybrid and how long-term storage is ensured;

(g) describe the assumptions made, methodologies and frameworks applied for calculation of the amount of GHG removals.

AG75. The quantitative information shall be presented by using the following table.

Removals	Comparative	N	% N / N-1
Total GHG removals from own operations (tCO_2eq)			
Total GHG removals from value chain (tCO_2eq)			

WORKING PAPER

[Optional Disclosure Requirement 18] – Financing GHG mitigation projects outside of the undertaking's value chain

AG76. Financing GHG reduction projects outside the undertaking's value chain, that fulfil high quality standards, can be a useful means to mitigate climate change. Consequently, this Standard allows to disclose, separately from the GHG inventory, if, and to which extent and with regard to which quality criteria and standards, carbon offsets were purchased or sold by the undertaking during the reporting period.

Calculation rules

AG77. When compiling the information required under paragraphs 74 and 76, the undertaking shall:

(a) only report carbon offsets purchased from or sold to the voluntary market that are verified against the requirements of recognised national or international quality standards;

(b) disclose the list of projects financed to acquire carbon offsets, including the quality criteria and standard they fulfil, their category (agriculture, industrial processes, energy efficiency and fuel switching, forestry and land use, transportation, household devices, renewables, waste disposal, etc.), location and the current year generated volume by project.

(c) disclose the list of projects implemented or planned to sell carbon offsets, including the quality criteria and standards they fulfil;

(d) if applicable, explain the role of carbon offsets for its climate mitigation policy;

(e) not include carbon offsets in the GHG inventory to settle its total GHG emissions;

(f) not disclose carbon offsets as a means to reach GHG reduction targets.

AG78. The information shall be presented by using the following table.

Financing GHG mitigation projects outside of an undertaking's value chain	Comparative	N	% N / N-1
Total purchased carbon offsets emissions (tCO_2eq)			
Total sold carbon offsets (tCO_2eq)			

AG79. For purchased carbon offsets emissions, a table may be presented detailing the list of projects including their:

(a) category;

(b) country;

(c) quality standards;

(d) current year generated volume.

[Optional Disclosure Requirement 19] – Avoided GHG emissions from products and services

AG80. Accounting for an undertaking's Scope 1, 2 and 3 GHG emissions and for avoided emissions from products based on comparative assessments are complementary but fundamentally different concepts. This Standard requires undertakings to foremost disclose Scope 1, 2, and 3 emissions and related reduction targets. Comparative assessments shall neither take precedence over nor detract an undertaking in this regard. Comparative impacts shall not be used to adjust Scope 1, 2, and 3 emissions or claim GHG reduction target achievement. Given the persisting methodological

WORKING PAPER

challenges on accounting and reporting on avoided emissions, this Standard insists that undertakings rigorously disclose information on methodologies used and assumptions made.

Calculation rules

AG81. When compiling the information required under paragraphs 77 and 79, the undertaking shall:

(a) in the absence of generally accepted accounting methodologies, consider the recommendations from the World Resource Institute Working Paper "Estimating and reporting the comparative emissions impacts of products" (WRI 2018);

(b) use the following formulas to calculate avoided GHG emissions:

(i) when using the attributional approach:

$$Avoided\ GHG\ emissions_{attributional} = life\ cycle\ emissions\ of\ reference\ product - life\ cycle\ emissions\ of\ assessed\ product$$

whereas total avoided GHG emissions are the sum of all products assessed,

(ii) when using the consequential approach:

$$Avoided\ GHG\ emissions_{consequential} = emissions\ in\ baseline\ scenario - emissions\ in\ policy\ scenario$$

whereas total avoided GHG emissions are the sum of all products assessed;

(c) disclose as part of the description of applied methodologies:

(i) the percentage of the product(s), on which avoided emissions are disclosed, in terms of the undertaking's total product portfolio;

(ii) whether attributional or consequential approaches have been used for the assessment;

(iii) when using the attributional approach, the assessed and reference products, why they were selected, the life cycle GHG emissions of each, which life cycle GHG emissions have been omitted, if at all;

(iv) when using the consequential approach, the baseline and policy scenarios, why they were selected, the GHG emissions of each, which GHG emissions have been omitted if at all;

(v) if attribution to different entities in the undertaking's value chain is attempted, the attribution method and ratio;

(vi) a quantitative estimate or qualitative description of the uncertainty of the results, as well as the range of results from sensitivity analyses for key parameters and assumptions.

(vii) explain why GHG reductions are additional, i.e., why they would not have occurred in the absence of the product sales to customers and demonstrate that the reference products (attributional approach) or the baseline (consequential method) are above the average market performance and exceed EU and Member states' regulatory requirements.

(d) if applicable, explain the role of avoided GHG emission for its climate mitigation policy.

AG82. The quantitative information shall be presented by using the following table.

Avoided GHG emissions from products and services	Comparative	N	% N / N-1

WORKING PAPER

Estimated total avoided GHG emissions from products (tCO_2eq)			

[Disclosure Requirement 20] – GHG intensity per revenue

Calculation Rules

AG83. When disclosing the information required under paragraph 82, the undertaking shall:

(a) calculate the GHG intensity ratio by the following formula:

$$\frac{Total\ GHG\ emissions\ (t\ CO_2 eq)}{Net\ turnover\ \ (Monetary\ unit)};$$

(b) express the total GHG emissions tCO_2eq and the net turnover in monetary unit (e.g., million Euros);

(c) include in the denominator its overall net turnover;

(d) calculate the total GHG emissions as per Disclosure Requirement 16;

(e) calculate the net turnover in line with the provisions for financial statements.

AG84. The quantitative information shall be presented by using the following table.

GHG intensity per revenue	Comparative	N	% N / N-1
Total GHG emissions per net turnover (tCO_2eq/Monetary unit)			

Connectivity with financial reporting

AG85. For the net turnover, the reconciliation to the most relevant amount presented in the financial statements shall be structured as follows:

(a) The undertaking shall include a cross-reference to the related line item in the financial statement.

(b) If the net turnover can't be directly cross-referenced to a line item in the financial statement, the undertaking shall provide a quantitative reconciliation table between [the turnover as required in the Disclosure Requirement 20 "GHG intensity"] and the financial statements. The undertaking may use the format of the table for reconciliation shown below:

Turnover (Disclosure Requirement 20 on 'GHG intensity')	
Turnover (other)	
Total turnover (Financial statements)	

[Disclosure Requirement 21] – Financial exposure to physical risks

AG86. Principal climate-related physical risks as described under Disclosure Requirement 6 may affect the financial position (owned assets) and performance (potential future increase/decrease in revenues and costs due to business interruptions, increased supply prices, etc. resulting in potential margins erosions) of the undertaking. The purpose of this Disclosure Requirement is to provide transparency on the estimated potential financial effects of these physical risks.

WORKING PAPER

Calculation rules

AG87. When disclosing the information required under paragraph 89 (a) and (b), the undertaking shall explain whether and how it has conducted a vulnerability assessment of the assets and activities to determine effects on future financial performance and position. The process to be followed by the undertaking shall:

(a) start from the outcome of the physical risk identification and assessment process described in Disclosure Requirement 5. The detailed vulnerability assessment calculation rules and methodology may be based on free definitions as they depend on the undertaking's industry and organisation specific climate-related risk management. On the contrary, the description of the methodologies and definitions used by the undertaking, including at least the scope of application, the methodology assumptions and limitations and the critical parameters used, shall be disclosed both for the net assets and the share of turnover from business activities exposed to physical risks;

(b) assess the amount (monetary unit) of assets exposed to physical risks as a range of net assets value, resulting from the sum of owned assets considered at risk following the vulnerability assessment;

(c) assess the share of business activities exposed to physical risks as a list of business activities, possibly by operating segment, with their percentage of total revenues, the vulnerability factors (location, hazards, events) and when possible the magnitude of the potential financial effects in terms of margin erosion over the short-, medium- and long-term.

AG88. The disclosures shall not include amounts that are already accounted for in the financial statements.

AG89. The amount (monetary unit) of assets exposed to physical risks may be presented as a range of net assets value.

AG90. The undertaking may use the following table.

Physical risks	Potential financial impact	N	Estimated range in future years	Comment s Eg: related business activities; vulnerability factor (location, hazards, events)
Acute	Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)			
- Increased severity of extreme weather events such as cyclones and floods	Reduced revenue and higher costs from negative impacts on workforce (e.g., health, safety, absenteeism)			
Chronic - Changes in precipitation patterns	Write-offs and early retirement of existing assets (e.g., damage to property and assets in "high-risk" locations)			
- and extreme variability in weather - patterns	Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)			

- Rising mean temperatures - Rising sea level	Increased capital costs (e.g., damage to facilities)			
	Reduced revenues from lower sales/output			
	Increased insurance premiums and potential for reduced availability of insurance on assets in "high-risk" locations			

Connectivity with financial reporting

AG91. For the net assets, the reconciliation to the most relevant amount presented in the financial statements shall be structured as follows:

(a) The undertaking shall include a cross-reference to the related line item in the financial statement.

(b) If it can't be directly cross-referenced to a line item in the financial statement, the undertaking may provide a quantitative reconciliation table between [the net current assets value as required in 'Financial exposure to physical risks' and financial statements. The undertaking may use the format of the table for reconciliation shown below:

Net current assets value used to calculate the current assets exposed to physical risks ('Financial exposure to physical risks')	
Net current assets value (other)	
Net current assets value (Financial statements)	

AG92. For the financial datapoints (current year) related to the share of revenues from business activities exposed to physical risks, the undertaking shall include a reference to the related line item in the financial statement as follows:

(a) The undertaking shall include a cross-reference to the related line item in the financial statement.

(b) If it cannot be directly cross-referenced to a line item in the financial statement, the undertaking may provide a quantitative reconciliation table between [the financial datapoints related to the share of business activities exposed to physical risks as required in 'Financial exposure to physical risks' and financial statements. The undertaking may use the format of the table for reconciliation shown below:

Turnover / OpEx / R&D / investments / write off / impairments (current year) related to 'share of business activities exposed to physical risks', ('Financial exposure to physical risks')	
Turnover / OpEx / R&D/ investments / write off / impairments (current year) (other)	
Turnover / OpEx / R&D / investments / write off / impairments (current year) (Financial statements)	

AG93. The undertaking shall include a statement of consistency illustrating the consistency of data and of assumptions made in sustainability reporting to assess the financial exposure

WORKING PAPER

to physical risks with the corresponding data and assumptions used for the financial statements (e.g. impairment of assets, useful life of assets, estimates and provisions).

AG94. A reference to the relevant paragraphs of the financial statements shall be included in the statement of consistency. If the assumptions are not consistent, the statement of consistency should state that fact and explain the reason. (e.g., the full financial implications of climate-related risks are still under assessment or are not deemed material).

AG95. The undertaking may consider areas such as climate-related indicators of impairment of assets, impacts of climate-related matters on useful life of assets, assessment of provisions to reflect new environmental laws and climate-related commitments by the entity, etc.

[Disclosure Requirement 22] – Financial exposure to transition risks

WORKING PAPER

AG96. Currently no commonly agreed methodology exists to assess or measure how climate-related transition risks and opportunities may affect the future financial position and performance of the undertaking, the disclosure required by paragraph 91 remains largely based on the exercise of judgement. In this context, the undertaking shall disclose an estimation of the potential effects of its principal transition risks in relation to (i) the potential future financial position in terms of assets and liabilities and (ii) the potential future financial performance in terms of revenues and costs and explain the methodologies applied and critical assumptions made.

Calculation rules

AG97. When disclosing the information required under paragraph 93 (a) (i) concerning the potential future effects on assets, the undertaking shall at least include an estimation of the amount of potentially stranded assets (in monetary unit). Stranded assets are understood as currently owned or operated assets of the undertaking with significant locked-in GHG emissions over their operating lifetime. The amount may be expressed as a range of net asset value based on different transition scenarios, including a 1.5°C and 2°C scenario.

AG98. When disclosing the information required under paragraph 93 (a) (ii) related to the potential future effects on liabilities:

(a) undertakings that operate installations regulated under an emission trading scheme shall include a range of potential future financial liabilities originating from these schemes;

(b) undertakings subject to the EU ETS, in particular, shall disclose the potential future liabilities of the allocation plan over the period 2021-2030, including the number of quotas to be purchased yearly on the market (gap between estimated future emissions under various transition scenarios and free allocations that are known for the period 2021-2030) and the estimated yearly cost per ton to be purchased;

(c) the undertaking may also include its monetised gross Scope 1, 2 and total GHG emissions (in monetary unit) calculated as follows:

(i) monetised Scope 1 and 2 GHG emissions in the reporting year by the following formula:

$$(gross\ Scope\ 1\ GHG\ emissions\ (t\ CO_2eq) + gross\ Scope\ 2\ GHG\ emission\ (t\ CO_2eq)) \times\ GHG\ emission\ cost\ rate\ \left(\frac{€}{t\ CO_2eq}\right)$$

(ii) monetised total GHG emissions in the reporting year by the following formula:

$$Total\ GHG\ emissions\ (t\ CO_2eq) \times\ GHG\ emission\ cost\ rate\ \left(\frac{€}{t\ CO_2eq}\right.$$

(iii) by use of a lower, middle and upper cost rate for GHG emissions (e.g. market carbon price and different estimates for the societal costs of carbon) and reasons for selecting them.

AG99. Other approaches and methodologies may be applied to assess how climate-related risks may affect the future financial position of the undertaking. In any case, the disclosure of financial exposure shall be completed by a description of the methodologies and definitions used by the undertaking, including at least, the scope of application, the methodology assumptions and limitations, the scenario analyses that were conducted and the critical parameters used.

AG100. When disclosing the information required under paragraph 93 (b) concerning the potential future financial performance, the undertaking shall include a description of how it may be affected by climate-related transition risks in terms of the turnover related to its business activities. Even if no detailed calculation rules are generally agreed-upon, there is a market convergence on existing methodologies to consider the following steps:

(a) screening of the activities to identify on the one side significantly harmful activities with regards to climate change mitigation that are unable by nature to transition and on the other side those considered as significantly harmful to climate change mitigation but that have options available to transition to a future low carbon climate-resilient economy. This screening shall be science based and would typically be linked with the technical screening criteria of the Taxonomy Regulation;

(b) mapping of the activities through the lens of transition risk events taking into consideration their likelihood, magnitude and duration according to selected scenario analyses. This mapping shall be carried out by using the following events (not comprehensive) list: increased external carbon pricing due to policy changes; increased costs due to regulation or substitution of existing products and services (shifting energy use toward lower emission sources, adopting energy-efficiency solutions, etc.) ; loss of revenues due to technological innovation such as renewable energy, battery storage, energy efficiency, and carbon capture and storage ; increase of operating costs due to a shift of market demand for certain commodities, product or services ; loss due to litigation, loss of revenue due to shift in customer preferences or change in community perception of the company, etc.

AG101. The business activities exposed to transition risks resulting in margin erosion shall be disclosed as an estimated share of revenues from business activities (or operating segment) and shall be completed by a description of the methodologies and definitions used by the undertaking, including at least the scope of application, the methodology assumptions and limitations, if and how scenario analyses were applied and critical parameters used.

AG102. The undertaking may use the table below to present the information required under paragraph 93 (b):

Transition risks	Potential financial impact	N	Estimated range in future years	Comment
Policy and legal				
- Increased pricing of GHG emissions - Enhanced emissions-reporting obligations - Mandates on and regulation of existing products and services - Exposure to litigation	Increased operating costs (e.g., higher compliance costs, increased insurance premiums)			
	Write-offs, asset impairment, and early retirement of existing assets due to policy changes			
	Increased costs and/or reduced demand for products and services resulting from fines and judgments			
Technology				

WORKING PAPER

- Substitution of existing products and services with lower emissions options - Unsuccessful investment in new technologies - Costs to transition to lower emissions technology	Write-offs and early retirement of existing assets			
	Reduced demand for products and services			
	R&D expenditures in new and alternative technologies			
	Capital investments in technology development			
	Costs to adopt/deploy new practices and processes			
Market				
- Changing customer behaviour - Uncertainty in market signals - Increased cost of raw materials	Reduced demand for goods and services due to shift in consumer preferences			
	Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment)			
	Abrupt and unexpected shifts in energy costs			
	Change in revenue mix and sources, resulting in decreased revenues			
	Re-pricing of assets (e.g., fossil fuel reserves, land valuations, securities valuations)			
Reputation				
- Shifts in consumer preferences - Stigmatization of sector - Increased stakeholder concern or - negative stakeholder feedback	Reduced revenue from decreased demand for goods/services			
	Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)			
	Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention)			
	Reduction in capital availability			

<u>Connectivity with financial reporting</u>

AG103. For the net stranded assets, the reconciliation to the most relevant amount presented in the financial statements shall be structured as follows:

(a) The undertaking should include a cross-reference to the related line item in the financial statement.

(b) If it can't be directly cross-referenced to a line item in the financial statement, the undertaking should provide a quantitative reconciliation table between [the net current assets value as required in 'Financial exposure to transition risks' and financial statements. The undertaking may use the format of the table for reconciliation shown below:

Net current assets value used to calculate the current assets exposed to transition risks ('Financial exposure to transition risks')	
Net current assets value (other)	
Net current assets value (Financial statements)	

AG104. For the liabilities, the undertaking shall make a reference to the description of the emission trading schemes in the financial statements.

AG105. If such reference cannot be made, under circumstances where financial statements are silent on emission trading schemes, the reconciliation to the most relevant amount presented in the financial statements shall be structured as follows:

(a) The undertaking shall include a cross-reference to the related line item in the financial statement.

(b) If the financial information cannot be directly cross-referenced to a line item in the financial statement, the undertaking shall provide a quantitative reconciliation table between the information related to the emission trading schemes and the financial statements. The undertaking may use the format of the table for reconciliation shown below:

Liabilities related to the regulatory emission trading schemes ('Financial exposure to transition risks')	
Liabilities related to the regulatory emission trading schemes (other)	
Liabilities related to the regulatory emission trading schemes (Financial statements)	

AG106. For the financial datapoints (current year) related to the share of revenues from business activities exposed to transition risks, the undertaking shall include a reference to the related line item in the financial statement as follows:

(a) The undertaking shall include a cross-reference to the related line item in the financial statement;

(b) If it can't be directly cross-referenced to a line item in the financial statement, the undertaking may provide a quantitative reconciliation table between [the financial datapoints related to the share of business activities exposed to physical risks as required in Disclosure Requirement 22 "Financial exposure to transition risks"] and the financial statements.

(c) The undertaking may use the format of the table for reconciliation shown below:

Turnover / OpEx / R&D/ investments / write off / impairments (current year) related to "share of business activities exposed to physical risks", ("Financial exposure to transition risks")	

WORKING PAPER

Turnover / OpEx / R&D/ investments / write off / impairments (current year) (other)	
Turnover / OpEx / R&D / investments / write off / impairments (current year) (Financial statements)	

AG107. The undertaking shall include a statement of consistency illustrating the consistency of data and of assumptions made in sustainability reporting to assess the financial exposure to physical risks with the corresponding data and assumptions used for the financial statements (e.g. impairment of assets, useful life of assets, estimates and provisions).

AG108. A reference to the relevant paragraphs of the financial statements shall be included in the statement of consistency. If the assumptions are not consistent, the statement of consistency shall state that fact and explain the reason. (e.g., the full financial implications of climate-related risks are still under assessment or are not deemed material).

AG109. The undertaking may consider areas such as climate-related indicators of impairment of assets, impacts of climate-related matters on useful life of assets, assessment of provisions to reflect new environmental laws and climate-related commitments by the entity, etc.

[Optional Disclosure Requirement 23] – Financial opportunities other than the Taxonomy regulation relating to climate change mitigation and adaptation

AG110. The information disclosed under paragraph 95 related to the market size for low carbon products and services or adaptation solutions over the short-, medium-, and long-term shall be linked with the information disclosed under the provisions of the Taxonomy Regulation.

Appendix C: Digitisation guidance

This appendix is an integral part of ESRS E1 on Climate change mitigation and climate change adaptation. It describes the instructions for the digital tagging.

To be further developed.

WORKING PAPER

Basis for conclusions

Context

BC100. This [draft] Basis for conclusions accompanies but is not part of [draft] ESRS E1 Climate change. It summarises the considerations and references of the [EFRAG Sustainability Standards Board (the 'Board')] in developing the contents of the [draft] standard. [Individual Board members may be giving greater weight to some factors than to others.]

BC101. The general approach followed by (the Board) covers the following steps:

(a) complying first with the requirement of the draft CSRD;

(b) seeking guidance if necessary from the existing NFRD and it 2017 and 2019 implementation guidelines;

(c) analysing the current international frameworks as recital 37 of the CSRD requires that "sustainability reporting standards should take account of existing standards and frameworks for sustainability reporting and accounting where appropriate. Those include the Global Reporting Initiative, the Sustainability Accounting Standards Board, the International Integrated Reporting Council, the International Accounting Standards Board, the Task-Force on Climate-related Financial Disclosures (TCFD), the Carbon Disclosure Standards Board, and CDP. Guidance from and coherence with these existing standards and frameworks have been sought;

(d) analysing the key findings and path to improvement indicated in the European Reporting Lab of EFRAG report issued in February 2020: How to improve climate-related reporting;

(e) analysing the concordance and compatibility with the prototype on climate-related disclosures published on 3 November 2021 by the Technical Readiness Working Group (TRWG) of the IFRS Foundation for consideration of the International Sustainability Standards Board (ISSB).

Objective of the [draft] standard

BC102. Based on the relevant provision from CSRD proposal, other EU legislation and the mandate and approach of the EFRAG PTF-ESRS, the objective of the [draft] standard is to specify Disclosure RequirementDisclosure Requirements which will enable users of the sustainability reporting to understand:

(a) the impact of the undertaking on climate change and its past, current, and future mitigation efforts in line with the Paris Agreement and limiting global warming to 1.5°C,

(b) the plans and capacity of the undertaking to adapt its business model(s) and operations in line with the transition to a sustainable economy and to contribute to limiting global warming to 1.5°C,

(c) the nature, type and extent of the climate-related risks and opportunities to which the undertaking is exposed, and

(d) the effects of climate-related risks and opportunities on the undertaking's existing assets and liabilities and ability to generate future cash-flows and therefore to create enterprise value in the short, medium and long term.

BC103. The [draft] standard derives from the draft CSRD stating that the sustainability reporting standards shall specify information to disclose about climate change mitigation and climate change adaptation.

BC104. The [draft] standard in addition covers Disclosure Requirements for energy consumption, as it is an important determinant of undertaking's GHG emissions and driver for climate-related transition risk.

WORKING PAPER

BC105. "Climate change mitigation" relates to the undertaking's endeavours to the general process of holding the increase in the global average temperature to well below 2 °C and pursuing efforts to limit it to 1.5 °C above pre-industrial levels, as laid down in the Paris Agreement. The standard covers Disclosure Requirements related to the seven Greenhouse Gases (GHG) carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3). It also covers Disclosure Requirements on how the undertaking addresses its GHG emissions as well as the transition risks associated with them. Other impacts on climate change (e.g., from land use changes, black carbon, tropospheric ozone etc.), are not yet explicitly addressed by this standard.

BC106. "Energy" covers all types of energy production and consumption.

BC107. "Climate change adaptation" relates to the undertaking's process of adjustment to actual and expected climate change. The standard covers Disclosure Requirements regarding climate-related hazards that can lead to physical climate risks for the undertaking and adaptation solutions that can reduce these risks. It also covers transition risks arising from the adaptation needs to climate-related hazards.

BC108. The [draft] standard covers Disclosure Requirements developed primarily from the perspective and for the reporting purpose of non-financial undertakings[2]. Following an assessment of the suitability of the [draft] standard for financial undertakings, financial undertakings shall also apply this [draft] standard in relation to their own operations and value chain, it being understood that they are in addition subject to specific regulatory and other sector-specific Disclosure Requirements as their main impacts, risks and opportunities are indirect via their portfolio of financial products and services.

BC109. Additional performance measures deemed relevant for the future enhancement of the climate standard are presented as part of this Basis for conclusions although they have not been prioritised for the [draft] standard. They relate to energy intensity, use of green hydrogen, breakdowns of GHG emissions and breakdowns of GHG intensity.

BC110. Should the undertaking wish to provide information on these matters on a voluntary basis, it may consider best practices and preliminary orientations presented in this Basis for conclusions.

WORKING PAPER

[2] A non-financial undertaking means an undertaking that is subject to the disclosure obligations laid down in Articles 19a and 29a of Directive 2013/34/EU and is not a financial undertaking, i.e. an asset manager, a credit institution as defined in Article 4(1), point (1), of Regulation (EU) No 575/2013 of the European Parliament and of the Council22, an investment firm as defined in Article 4(1), point (2), of Regulation (EU) No 575/2013, an insurance undertaking as defined in Article 13, point (1), of Directive 2009/138/EC of the European Parliament and of the Council23, or a reinsurance undertaking as defined in Article 13, point (4) of Directive 2009/138/EC [Disclosures Delegated Act of the (EU) 2020/852 Regulation, commonly referred to as the Taxonomy Regulation

Specific Climate-related Disclosure Requirements on Strategy

Strategy and Business Model

BC111. The Disclosure Requirements related to the undertaking's strategy and business model are defined in the dedicated cross-cutting standards ESRS 2.

BC112. This section relates to the proposals for climate-related disclosures on the 1.5°C transition plan of the undertaking and the resilience of the business model and strategy to principal climate-related transition and physical risks. These disclosures provide transparency for investors and other stakeholders how the undertaking considers climate-related impacts, risks and opportunities in defining and adjusting its overall strategic direction. Information on the implementation of a "climate strategy" including policies, action plans and resources is provided in the "Policies & Targets" and "Actions & Resources" of this working paper.

EU legislation and recommendations

BC113. The Non-Financial Reporting Directive[3] ('NFRD') requires that the undertaking disclose information about their business strategy and the resilience of the business model and strategy to risks related to sustainability matters.

BC114. In the European Commission's proposal for a Corporate Sustainability Reporting Directive[4] ('CSRD'), Article 19a (2) asks the undertaking to report on the business model and strategy, including:

(a) "the resilience of the undertaking's business model and strategy to risks related to sustainability matters";

(b) "the opportunities for the undertaking related to sustainability matters";

(c) "the plans of the undertaking to ensure that its business model and strategy are compatible with the transition to a sustainable economy and with the limiting of global warming to 1.5 °C in line with the Paris Agreement";

(d) "how the undertaking's business model and strategy take account of the interests of the undertaking's stakeholders and of the impacts of the undertaking on sustainability matters";

(e) how the undertaking's strategy has been implemented with regard to sustainability matters."

BC115. The European Commission's Guidelines on reporting climate-related information[5] recommend the description of the "impact of climate-related risks and opportunities on the company's business model, strategy and financial planning". In addition, the Guidelines recommend a description of the "ways in which the company's business model can impact the climate both positively and negatively", taking account of the double materiality concept.

BC116. The Guidelines also recommend the disclosure of the "resilience of the company's business model and strategy", taking into consideration different climate related scenarios over different time horizons. "Companies are encouraged to consider a 1.5°C scenario, in light of the conclusions of the Intergovernmental Panel on Climate Change ('IPCC') 2018 Special Report".

[3] Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups. Available here.

[4] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

[5] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

WORKING PAPER

BC117. The Guidelines finally provide "further guidance" by recommending the disclosure of:

(a) any changes in the company's business model and strategy to address transition and physical risks and to take advantage of climate-related business opportunities,

(b) the company's key resources are dependent on natural capitals, such as water, land, ecosystems or biodiversity that are at risk because of climate change,

(c) how any changes in the company's business model and strategy to address climate change mitigation and/or adaptation will change the company's human capital needs,

(d) opportunities related to resource efficiency and cost savings, the adoption of low-emission energy sources, the development of new products and services, access to new markets, and building resilience along the value chain.

BC118. The EU Taxonomy Regulation[6] establishes the overarching framework that allows to classify economic activities as environmentally sustainable. Article 8 of the Taxonomy Regulation and the related Delegated Act require the undertakings under the scope of the NFRD/CSRD to report a share of turnover, capital expenditures and operating expenditures from taxonomy eligible, and taxonomy aligned activities, which – when monitored over time – could be considered as a measure of how an undertaking progresses in the transition to a climate-neutral economy.

Global reporting frameworks

BC119. The climate-related disclosures prototype developed by the TRWG of the IFRS[7] proposes Disclosure Requirements on strategy with the objective to understand the strategy for addressing climate-related risks and opportunities. Consequently, the prototype suggests to disclose:

(a) "the significant climate-related risks and opportunities that [the undertaking] reasonably expects could affect its business model, strategy and cash flows over the short, medium or long term;

(b) the impact of significant climate-related risks and opportunities on its business model;

(c) the impact of significant climate-related risks and opportunities on management's strategy and decision making;

(d) the impact of significant climate-related risks and opportunities on its financial position, financial performance and cash flows at the reporting period end, and the anticipated effects over the short, medium and long term; and

(e) the resilience of the entity's strategy to significant climate-related risks associated with the physical impacts of climate change and the transition to a lower-carbon economy".

BC120. The CDSB Framework[8] recommends that companies report on management's environmental policies, strategy and targets, including the indicators, plans and timelines used to assess performance and that the company's management summarises their conclusions about the effect of environmental impacts, risks and opportunities on the organisation's future performance and position.

BC121. The SASB Standards[9] recommend that companies disclose the entity's strategic approach regarding actual and potential impacts of topic-related risks and opportunities on the organisation's businesses, strategy, and financial planning, over the short-, medium-, and

[6] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Taxonomy Regulation). Available here.

[7] TRWG of the IFRS, "Climate-related disclosures prototype", November 2021. Available here.

[8] CDSB, "CDSB Framework for reporting environment & climate change information Advancing and aligning disclosure of environmental information in mainstream reports", December 2019. Available here.

[9] SASB Standards. Available here.

WORKING PAPER

long-term. Each industry specific SASB Standard includes climate-related risks and opportunities that are likely to be material in a given industry.

BC122. The IR Framework[10] recommends reporting on the company's short-, medium- and long-term strategic objectives, the strategies it has in place, or intends to implement, to achieve those strategic objectives, the resource allocation plans it has to implement its strategy and how it will measure achievements and target outcomes for the short-, medium- and long-term. The IR framework defines a company's business model as its system of transforming inputs, through its business activities, into outputs and outcomes that aims to fulfil the organization's strategic purposes and create value over the short-, medium- and long-term.

BC123. The Task Force on Climate-Related Finassncial Disclosures ('TCFD') recommends disclosing on the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning. TCFD argues that "investors and other stakeholders need to understand how climate-related issues may affect an organisation's businesses, strategy, and financial planning over the short, medium, and long term. Such information is used to inform expectations about the future performance of an organization." TCFD consequently recommends reporting on "the climate-related risks and opportunities the organization has identified over the short, medium, and long term" (Strategy recommended disclosure a)); "the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning" (Strategy recommended disclosure b)); and "the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario" (Strategy recommended disclosure c)).

BC124. In a publication entitled "Guidance on Metrics, Targets and Transition plans"[11], the TCFD gives further guidance on disclosure of (1) characteristics of effective transition plans, (2) transition plan considerations, and (3) disclosing transition plan information under the TCFD recommendations.

BC125. As part of the GRI Universal Standards, GRI 2[12] asks for a disclosure of a statement on sustainable development strategy (disclosure 2-22, p. 34).

BC126. The CDP climate change questionnaire[13] asks companies in Section C3 to explain how climate-related risks and opportunities influenced the company's strategy and/or financial planning, whether there is low-carbon transition plan and if it is a scheduled resolution item at Annual General Meetings, if the company intends to publish a low-carbon transition plan in the next two years, if the organization uses climate-related scenario analysis to inform its strategy and how climate-related risks and opportunities have influenced the organisation's strategy.

WORKING PAPER

Users' needs

BC127. TCFD analyses that investors and other stakeholders need to understand how climate change can affect an undertaking's business strategy over the short, medium, and long term, since this information informs the expectations about the undertaking's future performance.[14]

BC128. Recital 41 of the draft CSRD states that "with regard to climate-related information, users are interested in knowing about undertakings' physical and transition risks, and about their resilience to different climate scenarios".

BC129. Civil society organisations, governmental bodies, consumers, workers and people affected by the consequences of climate change, among others, are increasingly interested to

[10] IR Framework, January 2021. Available here.

[11] TCFD, "Guidance on Metrics, Targets, and Transition Plans", October 2021. Available here.

[12] GRI Universal Standards 2021. Available here.

[13] CDP, "Climate Change Questionnaire", 2021. Available here.

[14] TCFD, "Final Report Recommendations of the Task Force on Climate-related Financial Disclosures", 2017, p. 20. Available here.

understand how the undertaking's current business model and strategy cause and drive GHG emissions in own operations but also along the value chain and if the undertaking has a credible transition plan in place that is compatible with limiting of global warming to 1.5°C.

Conclusions

BC130. Limiting global warming to 1.5°C in line with the Paris Agreement necessitates a transition to a climate neutral economy by the mid of this century. In order to be able to create value over the mid- and long-term, undertakings need to ensure that their business model and strategy is compatible with the transition ahead. Therefore, it is important that undertakings create transparency on how resilient the current business model of an undertaking is towards climate-related risks and how it plans to ensure that its business model and strategy are compatible with the transition to a climate-neutral economy and with limiting global warming to 1.5 °C in line with the Paris Agreement.

BC131. Some sectors, notably those with high direct GHG emissions, face higher challenges related to the transition to a climate-neutral economy than others. The materialisation of physical climate risks also greatly differs among entities depending, among others, on the type of their activities and business relationships and the location of their assets. To conclude, despite entity-specific differences, all undertakings will face the need to assess how climate change can affect them, to test their current business models and practices against transition risks and the physical hazards of climate change, and to disclose plans of how to be part of the transition ahead.

BC132. Limiting such information to an undertaking's own operations might disguise principal climate-related impacts, risks and opportunities that are linked to its broader business context. Hence, reporting should take into account the whole value chain of an undertaking.

BC133. Notably the TCFD and CDP, among other reporting frameworks, have led to an improvement climate-related reporting on strategy and business model, especially among larger undertakings.

Choice of specific disclosures

Transition plan in with the Paris Agreement

BC134. **The [draft] standard includes the following Disclosure Requirement 1: "The undertaking shall disclose its plans to ensure that its business model and strategy are compatible with the transition to a climate-neutral economy and with limiting global warming to 1.5 °C in line with the Paris Agreement".**

BC135. Stakeholders need to understand how the undertaking plans to ensure that its business model and strategy are compatible with the transition to a climate-neutral economy and with limiting global warming to 1.5 °C in line with the Paris Agreement.

BC136. A transition plan is essentially a cross-cutting instrument that contains different elements related to strategy, policies, targets, action plans and resources. Consequently, the disclosure should include information that is material to understand the undertaking's strategic direction, including references but not duplicating, information from other sections of the [draft] standard.

BC137. An undertaking's transition plan is different from its climate change mitigation action plan. While the transition plan is understood as part of an undertaking's overall strategy that includes a set of targets and actions supporting its transition towards a climate-neutral economy. A climate change mitigation action plan is considered to be a part of the overall transition plan which is smore specific and provides an overview of key actions taken or planned to achieve a GHG emission reduction targets or to implement a climate change mitigation policy, including timelines, responsibilities, (expected) outcomes and allocated resources.

WORKING PAPER

BC138. **Locked-in emissions**: Locked-in emissions are estimates of future GHG emissions that are likely to be caused by an undertaking's assets or sold products within their operating lifetime. The amount of locked-in emissions indicates to investors and other stakeholders the viability of an undertaking's transition plan and climate targets, as well as the risk for stranded assets.

BC139. **Taxonomy's alignment**: Given the intention of the EU Taxonomy to classify economic activities as substantially contributing to the objective of climate change mitigation, among others, the role of an undertaking's Taxonomy-alignment is meaningful information an undertaking should reflect upon in the context of its transition plan.

BC140. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD and is compatible with TCFD and IFRS. Article 19a (2) (iii) of the CSRD asks undertakings to report on "the plans of the undertaking to ensure that its business model and strategy are compatible with the transition to a sustainable economy and with the limiting of global warming to 1.5 °C in line with the Paris Agreement". TCFD guidance on metrics, targets and transition plans refers to "plans for transitioning to a low-carbon economy, which could include GHG emissions targets and specific activities intended to reduce GHG emissions in their operations and value chain or to otherwise support the transition". IFRS climate-related disclosure prototype directly refers to "transition plans".

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
1,5°C transition plan	Article 19a, 2. (a) (iii)		TCFD, Guidance on metrics, targets, and transition plans (2021), Strategy - Recommendation (b) IFRS, Climate-related disclosure prototype (2021), Disclosure 8

<u>Resilience of the strategy and business model to principal climate-related transition and physical risks</u>

BC141. **The [draft] standard includes the following Disclosure Requirement 2: "The undertaking shall disclose information on the resilience of the strategy and business model(s) of the undertaking to principal climate-related transition and physical risks".**

BC142. Resilience is generally understood as the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.[15] When describing the resilience of the strategy and business model(s) towards climate-related risks, an undertaking *should* therefore reflect on how the materialisation of its principal transition and physical risks could affect the way it creates value and the mechanisms with which the strategy and business model(s) can absorb or recover from these effects.

BC143. **Climate-related scenario analysis**: Climate-related scenario analysis is a highly useful approach to identify principal climate-related risks (and opportunities) and test, if the current business model of the undertaking will withstand in different conceivable futures. (see also section "Impacts, Risks and Opportunities" for more information on scenario analysis).

BC144. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD and the European Commission's Guidelines on reporting climate-related information. It is

[15] IPCC, "Fifth Assessment Report (AR5) Climate Change: Impacts, Adaptation, and Vulnerability", 2014. Available here).

WORKING PAPER

also compatible with TCFD and the IFRS/TRWG climate prototype. Article 19a (2) (a) of the CSRD asks undertakings to report on “the resilience of the undertaking's business model and strategy to risks related to sustainability matters”. The European Commission’s Guidelines on non-financial reporting demand the description of “the resilience of the company’s business model and strategy, taking into consideration different climate related scenarios over different time horizons, including at least a 2°C or lower scenario and a greater than 2ºC scenario”. TCFD final report recommendations propose to “describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario”. IFRS climate-related disclosure prototype requires undertakings to “disclose an analysis of the resilience of the entity’s strategy to significant climate-related risks (physical and transition)”.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Resilience of the strategy and business model to principal climate-related transition and physical risks	Article 19a, 2. (a) (iii)	Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.1	TCFD, Final report recommendations (2017), Strategy – Recommended disclosure (c) IFRS, Climate-related disclosure prototype (2021), Disclosure 10

WORKING PAPER

Governance

BC145. The Disclosure Requirements related to sustainability governance are defined in the dedicated cross-cutting standard ESRS 3.

BC146. This section relates to the proposals for specific disclosures on internal climate-related incentive mechanisms applied by an undertaking, including climate-related targets and performance indicators in relation to compensation schemes and internal carbon pricing schemes.

EU legislation and recommendations

BC147. Article 19a lit. (c) of the draft CSRD[16] requires entities to disclose "a description of the role of the administrative, management and supervisory bodies with regards to sustainability factors".

BC148. Annex IV of the EMAS Regulation[17] states that the environmental statement shall contain "a brief description of the governance structure supporting the environmental management system of the organisation".

BC149. The European Commission's Guidelines on reporting climate-related information[18] underline that "governance and control systems are key to stakeholders' understanding of the robustness of a company's approach to climate-related issues. Information on the involvement of the board and management, in particular their respective responsibilities in relation to climate change, informs stakeholders on the level of the company's awareness of climate-related issues. When describing the role of the board, the company may wish to make a reference to any corporate governance statement that it is required to publish." More specifically, and so as to cover the TCFD recommendations, the guidelines recommend the disclosure of the board's oversight of climate-related risks and opportunities and of the management's role in assessing and managing climate-related risks and opportunities and explain the rationale for the approach. Moreover, it recommends disclosing the description of whether and how the company's remuneration policy takes account of climate-related performance, including performance against targets set. Finally, it recommends disclosing how scenarios and/or internal carbon pricing are used for risk management actions such as mitigation, transfer or adaptation.

Global reporting frameworks

BC150. The climate-related disclosures prototype developed by the TRWG of the IFRS[19] proposes Disclosure Requirements on governance with the objective to understand the governance processes, controls and procedures used to monitor and manage climate-related risks and opportunities. Consequently, the prototype suggests to disclose:

(a) "the identity of the body or individual within a body responsible for climate-related risks and opportunities;

(b) how the body's responsibilities for climate-related risks and opportunities are reflected in terms of reference, board mandates and other relevant entity policies;

(c) how the body ensures that the correct skills and competencies are available to oversee strategies designed to respond to climate-related risks and opportunities;

[16] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

[17] The Revised Annexes of the EMAS Regulation, 2018. Available here.

[18] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

[19] TRWG of the IFRS, "Climate-related disclosures prototype", November 2021. Available here.

WORKING PAPER

(d) the processes and frequency by which the body and its committees (audit, risk or other committees) are informed about climate-related matters and the associated climate-related risks and opportunities".

BC151. Complementary to this, the prototype proposes cross-industry metrics with regards to internal carbon prices and climate-related remuneration.

BC152. The CDSB Framework[20] recommends undertakings to describe the governance of environmental policies, strategy and information.

BC153. The SASB Standards[21] suggest that companies should disclose the entity's governance around the risks and opportunities related to the topic, including board oversight of and management's role in assessing and managing such risks and opportunities.

BC154. The IR Framework[22] highlights that an integrated report should answer the following question: How does the organisation's governance structure support its ability to create value in the short-, medium- and long-term? Thus, an integrated report provides insight about how such matters as the following are linked to its ability to create value.

BC155. TCFD recommends that an organisation should disclose on governance around climate-related risks and opportunities. It argues that "investors, lenders, insurance underwriters, and other users of climate-related financial disclosures (…) are interested in understanding the role an organisation's board plays in overseeing climate-related issues as well as management's role in assessing and managing those issues" as "such information supports evaluations of whether material climate-related issues receive appropriate board and management attention"[23]. Consequently, TCFD recommends reporting on the board's oversight of climate-related risks and opportunities (Governance recommended disclosure a)) and the management's role in assessing and managing climate-related risks and opportunities (Governance recommended disclosure b)).

BC156. According to TCFD 2021 guidance on metrics, targets and transition plans[24], TCFD argues that companies should disclose the "proportion of executive management remuneration linked to climate consideration". As stated in the guidance, "remuneration policies are important incentives for achieving an organization's goals and objectives and may provide insight on an organization's governance, oversight, and accountability for managing climate-related issues". The document adds that "the ways in which organizations link executive compensation to performance on issues related to climate change will be specific to their company and governance structure", as "some organizations choose to report the percentage of the executive's pay linked to climate considerations, while others discuss weighting factors or total amount of compensation that could be impacted".

BC157. In addition, TCFD recommends disclosure of internal carbon prices. The rationale is that carbon pricing has emerged as a critical forward-looking metric that can help organisations manage climate-related transition risks and opportunities, as an incentive to drive energy efficiencies to reduce costs, and to guide capital investment decisions.

BC158. Based on TCFD's 2021 consultation, effective internal carbon prices should be sourced from credible reputable scientific research on carbon prices necessary to meet climate goals. An effective internal carbon price is also consistent with prices implied by the organisation's climate-related targets, increase over time to reflect diminishing carbon budget, are calculated regularly and incorporate geographical and sectoral granularity.

BC159. GRI 102 (2016)[25] requires reporting on the highest committee or position that formally reviews and approves the organisation's sustainability report and ensures that all material topics are covered. In the proposed update of the Universal Standards, GRI suggest a

[20] CDSB, "CDSB Framework for reporting environment & climate change information Advancing and aligning disclosure of environmental information in mainstream reports", December 2019. Available here.

[21] SASB Standards. Available here.

[22] IR Framework, January 2021. Available here.

[23] TCFD, "Final Report Recommendations of the Task Force on Climate-related Financial Disclosure", 2017, p.19. Available here.

[24] TCFD, "Guidance on Metrics, Targets, and Transition Plans", October 2021. Available here.

[25] GRI 102: General Disclosures 2016. Available here.

WORKING PAPER

whole range of governance disclosures, including: Governance structure and composition, Nomination and selection of the highest governance body, Chair of the highest governance body, Role of the highest governance body in overseeing the management of impacts, Delegation of responsibility for managing impacts, the highest governance body in sustainability reporting, Conflicts of interest, Communication of critical concerns, Collective knowledge of the highest governance body, Evaluation of the performance of the highest governance body, Remuneration policies, Process to determine remuneration Annual total compensation ratio (Disclosures 2-9 until 2-21).

BC160. The CDP[26] points out four governance topics in relation to climate change: board oversight, management responsibility, employee incentives and retirement schemes. Firstly, CDP recommends undertakings to disclose whether a board level oversight exists and, on the contrary, why it does not and identify the specific positions of the board members with responsibilities encompassing climate change issues. Secondly, the CDP recommends undertakings to provide the highest-level management position(s) or committee(s) with responsibility for climate-related issues and explicit where such position(s) or committee(s) stand in their organisational structure. Thirdly, the CDP recommends companies to indicate whether they are linked to target-achievements and provide any relevant details. Lastly, the CDP recommends companies to disclose whether they offer their employees an employment-based retirement scheme that incorporates Environmental, Social and Governance ('ESG') principles, including climate change.

BC161. Furthermore, CDP has developed one scenario analysis framework called the Carbon Pricing Corridors[27], which provides a range of carbon price levels to meet a 2°C scenario at five-year intervals. Through the Corridors Initiative, CDP and its partners are working with industry leaders to develop reference scenarios for specific sectors and provide a carbon price which companies can apply to risk assessment decisions. The Corridors can be used as a reference guide/proxy that encompasses the multiple changes occurring in a transitioning market as carbon pricing matures and evolves as a key driving force to a low-carbon economy.

<u>Users' needs</u>

BC162. TCFD argues that "remuneration policies are important incentives for achieving an organisation's goals and objectives and may provide insight on an organisation's governance, oversight, and accountability for management climate-related issues".[28]

BC163. Internal carbon pricing schemes and prices provide investors and data users with an understanding of whether key assumptions in an organisation's risk and opportunity assessment are reasonable. Moreover, they indicate how an undertaking incentivises the reduction of its GHG emissions to stakeholders requiring information on the climate-related impacts of the undertaking.

<u>Conclusions</u>

BC164. Based on the above, information on internal carbon pricing schemes and the consideration of climate targets and performance indicators in an undertaking's compensation schemes are meaningful supplementary elements to the disclosure of an undertaking's overall sustainability-related governance structures, ensuring alignment with TCFD recommendations and guidance and the IFRS/TRWG climate prototype.

<u>Choice of specific disclosures</u>

WORKING PAPER

[26] CDP, "Climate Change Questionnaire", 2021. Available here.

[27] CDP, "Carbon Pricing Corridors", May 2017. Available here.

[28] TCFD, "Guidance on Metrics, Targets, and Transition Plans", October 2021. Available here.

Climate-related targets and performance indicators in relation to compensation schemes

BC165. **The [draft] standard includes the following Disclosure Requirement 3: "The undertaking shall disclose whether and how it integrates climate-related targets and performance indicators in compensation schemes".**

BC166. This disclosure aims to provide transparency on the governance tools an undertaking has implemented to reduce GHG emissions and ensure the achievement of GHG-reduction targets. This is considered important information for stakeholders to gain insights whether the financial interests of the board and the management and operation levels are aligned with climate-related targets.

BC167. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD and the European Commission's Guidelines on reporting climate-related information. It is also compatible with TCFD and the IFRS/TRWG Climate-prototype. Article 19a 2(e) of the CSRD requires entities to disclose "a description of the role of the administrative, management and supervisory bodies with regards to sustainability factors". The European Commission Guidelines suggests reporting on "whether and how the company's remuneration policy takes account of climate-related performance, including performance against targets set". The TCFD recommends the description of "whether and how related performance metrics are incorporated into remuneration policies". The IFRS climate-related disclosure prototype introduces the following metric for remuneration, "the proportion of executive management remuneration affected by climate-related considerations in the current period". CDP asks if the organisation provides incentives for the management of climate-related issues, including the attainment of targets.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Integration of climate-related targets and performance in compensation schemes	Article 19a, 2. (e)	Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.2	TCFD, Final Report Recommendations (2017), Metrics and Targets – Recommended disclosure (a) IFRS, Climate-related Disclosure Prototype (2021), Disclosure 13 (g) CDP, Questionnaire (2021), C1.3

WORKING PAPER

Internal carbon pricing schemes

BC168. **The [draft] standard includes the following Disclosure Requirement 4: "The undertaking shall disclose how the internal carbon pricing schemes applied support its climate-related decision making".**

BC169. This disclosure aims to provide an understanding of how climate-related impacts, risks and opportunities are integrated in an undertaking's strategic and operational decision-making processes, as internal carbon prices influence the reduction of an undertaking's GHG emissions and support the assessment, anticipation and management of climate-related transition risks and opportunities. Companies should disclose how internal carbon pricing schemes are used to systematically assess climate-related transition risks and opportunities and incentivise the reductions of GHG emissions in their operations and in the value chain and describe which internal carbon price levels are used, how they are selected and which GHG emission volumes they are applied to.

BC170. With regards to the assessment of potential financial impacts of transition risks, carbon prices can be used in different contexts, such as informing investment decisions (R&D, assets, acquisitions, etc.), liabilities valuation (monetised gross GHG emissions or quotas to be purchased) or financial scenarios (impairment tests, fair value measurement, growth scenarios, etc.). A reconciliation between the carbon prices used in these various contexts, and comments on the assumptions made is useful to understand the consistency of undertaking's practices.

BC171. **EU legislation and global reporting frameworks**: This disclosure relies on the European Commission's Guidelines on reporting climate-related information. It is also compatible with TCFD and the IFRS/TRWG climate prototype. The European Commission Guidelines suggest reporting on "how internal carbon pricing are used for risk management actions such as mitigation, transfer or adaptation". TCFD final report recommendations propose organisations to provide "their internal carbon prices". IFRS climate-related disclosure prototype introduces the following metric for internal carbon prices, "the price for each metric tonne of greenhouse gas emissions used internally by an entity, including how the entity is applying the carbon price in decision-making (for example, investment decisions, transfer pricing, and scenario analysis), expressed in the reporting currency per metric tonne of CO2 equivalent". CDP asks if the organisation uses an internal price on carbon.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Internal carbon pricing schemes		Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.4	TCFD, Final Report Recommendations (2017), Metrics and Targets – Recommended disclosure (a) IFRS, Climate-related Disclosure Prototype (2021), Disclosure 13 (f) CDP, Questionnaire (2021), C11.3

WORKING PAPER

Impacts, Risks & Opportunities

BC172. The Disclosure Requirements related to material sustainability impacts, risks and opportunities are defined in the dedicated cross-cutting content standard ESRS 4.

BC173. This section relates to the proposals for specific disclosures on the identification and assessment process and its outcome for the undertaking's impacts on climate change as well as it's climate-related risks and opportunities, covering own operations and the value chain. The aim is to establish transparency for investors and other stakeholders on (1) what the principal impacts on climate change and climate-related risks and opportunities are and (2) how the undertaking identifies and assesses impacts on climate change (as part of the due diligence process) and climate-related risks and opportunities. Information on the financial effects of climate-related risks and opportunities is to be provided under Disclosure Requirement 21 "Financial exposure to physical risks", Disclosure Requirement 22 "Financial exposure to transition risks", and Disclosure Requirement 23 "Financial opportunities related to climate change mitigation or adaptation other than the Taxonomy Regulation". Information on principal climate-related impact, risks and opportunities are considered a necessary foundation for the climate-related information disclosed under ESRS 2 (strategy and business model) and Disclosure Requirements 1 and 2.

EU legislation and recommendations

BC174. Article 19a (1) of the draft CSRD[29] requires undertakings to include in the management report information "necessary to understand the undertaking's impacts on sustainability matters, and information necessary to understand how sustainability matters affect the undertaking's development, performance and position" (concept of double materiality). In this regard, Article 19a (2) lit. (e) (ii) draft CSRD requires a description of the "principal actual or potential adverse impacts connected with the undertaking's value chain, including its own operations, its products and services, its business relationships and its supply chain" (impact materiality). Article 19a (2) lit. (f) of the draft CSRD requires "a description of the principal risks to the undertaking related to sustainability matters, including the undertaking's principal dependencies on such matters, and how the undertaking manages those risks" and Article 19a (2) lit. (a) (ii) refers to "the opportunities for the undertaking related to sustainability matters" (financial materiality[30]).

BC175. Already under Article 19a (1) lit. (d) NFRD entities under its scope are required to report on the principal risks related to sustainability matters and how the undertaking manages those risks.

BC176. Annex IV of Regulation (EC) No. 1221/2009 (Eco-Management and Audit Scheme - EMAS)[31] requires organisations that participate in EMAS to disclose in their environmental statements "a description of all the significant direct and indirect environmental aspects which result in significant environmental impacts of the organisation, a brief description of the approach used to determine their significance and an explanation of the nature of the impacts as related to these aspects."

BC177. The EU Taxonomy[32] Climate Delegated Act specifies in its Annex I, Appendix A a generic process for the identification and assessment of physical climate risks and a classification of climate-related hazards as follows.

WORKING PAPER

[29] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

[30] As conceptualised in the PTF-NFRS final report "Proposals for a relevant and dynamic EU sustainability reporting standard-setting", pp. 74-82, March 2021. Available here.

[31] The Revised Annexes of the EMAS Regulation, 2018. Available here.

[32] Commission Delegated Regulation (EU) 2021/2139 supplementing the EU Taxonomy Regulation. Available here.

	Temperature-related	Wind-related	Water-related	Solid mass-related
Chronic	Changing temperature (air, freshwater, marine water)	Changing wind patterns	Changing precipitation patterns and types (rain, hail, snow/ice)	Coastal erosion
	Heat stress		Precipitation or hydrological variability	Soil degradation
	Temperature variability		Ocean acidification	Soil erosion
	Permafrost thawing		Saline intrusion	Solifluction
			Sea level rise	
			Water stress	
Acute	Heat wave	Cyclone, hurricane, typhoon	Drought	Avalanche
	Cold wave/frost	Storm (including blizzards, dust and sandstorms)	Heavy precipitation (rain, hail, snow/ice)	Landslide
	Wildfire	Tornado	Flood (coastal, fluvial, pluvial, ground water)	Subsidence
			Glacial lake outburst	

WORKING PAPER

BC178. Articles 4 and 6 of the Sustainable Finance Disclosure Regulation ('SFDR')[33] require transparency from financial market participants on adverse sustainability impacts and the integration of sustainability risks, including climate-related risks, into their investment decisions. Therefore, financial market participants rely on information of their investee companies to disclose their principal climate-related risks.

BC179. Based on the recommendations of the TCFD, the European Commission's Guidelines on reporting climate-related information[34] under the NFRD recommend to describe "the company's processes for identifying and assessing climate-related risks over the short, medium, and long term", the "principal climate-related risks the company has identified over the short, medium, and long term throughout the value chain", as well as "how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management". An important aspect of this description is how the company determines the relative significance of climate-related risks in relation to other risks.

BC180. They add that "many companies are dependent on natural capital". "If the natural capital itself is threatened by climate change then the company will be exposed to climate-related risks, especially physical risks". "Companies should therefore carefully consider their natural capital dependencies when identifying and reporting on their climate-related risks".

[33] Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector. Available here.

[34] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

BC181. The European Commission's Guidelines define transition risks as risks to the company that arise from the transition to a low-carbon and climate-resilient economy. They include:

(a) Policy risks, for example as a result of energy efficiency requirements, carbon-pricing mechanisms which increase the price of fossil fuels, or policies to encourage sustainable land use.

(b) Legal risks, for example the risk of litigation for failing to avoid or minimise adverse impacts on the climate or failing to adapt to climate change.

(c) Technology risks, for example if a technology with a less damaging impact on the climate replaces a technology that is more damaging to the climate.

(d) Market risks, for example if the choices of consumers and business customers shift towards products and services that are less damaging to the climate.

(e) Reputational risks, for example the difficulty of attracting and retaining customers, employees, business partners and investors if a company has reputation for damaging the climate.

BC182. They also define physical risks as risks to the company that arise from the physical effects of climate change. They include:

(a) Acute physical risks, which arise from particular events, especially weather-related events such as storms, floods, fires or heatwaves, that may damage production facilities and disrupt value chains.

(b) Chronic physical risks, which arise from longer-term changes in the climate, such as temperature changes, rising sea levels, reduced water availability, biodiversity loss and changes in land and soil productivity.

WORKING PAPER

Global reporting frameworks

BC183. Sustainability reporting frameworks and standards ask undertakings to report on risks and opportunities arising from climate change with possible effects on the undertaking's performance and position as well as on the impact of the undertaking's operations on climate change.

BC184. The CDSB framework, SASB standards, IR Framework and the TCFD recommendations focus on the reporting of risks and opportunities related to the effects of climate change, among others, on the financial performance, value creation and general position of the undertaking, having investors and other financial market participant as the primary target group. The GRI standards focus primarily on the impact of the undertaking on sustainability matters, including climate change. The CDP, in its climate change questionnaire[35], asks information on climate-related impacts, risks and opportunities.

BC185. The climate-related disclosures prototype developed by the TRWG of the IFRS[36] proposes Disclosure Requirements on risk management with the objective to understand how climate-related risks are identified, assessed and managed. Consequently, the prototype suggests to disclose:

(a) "the process by which climate-related risks are identified;

(b) the process, or processes, by which the entity assesses the significance of climate-related risks, including, where relevant:

   (i) how it determines the likelihood and impact of such risks (such as the qualitative factors or quantitative thresholds used);

   (ii) how it prioritises climate-related risks relative to other types of risks, including the use of risk assessment tools (for example, science-based risk assessment tools or other sources);

[35] CDP, "Climate Change Questionnaire", 2021. Available here.

[36] TRWG of the IFRS, "Climate-related disclosures prototype", November 2021. Available here.

(iii) which significant input parameters it uses (for example, data sources, the scope of operations covered and the level of detail used in assumptions); and (

(iv) whether it has changed the processes used compared to the prior reporting period;

(v) the extent to which, and how, these climate-related risk identification, assessment and management processes are integrated into the entity's overall risk management process".

BC186. The CDSB Framework[37] recommends undertakings to explain in their disclosures the material current and anticipated environmental risks and opportunities affecting the organisation.

BC187. The SASB Standards[38] suggest that companies should disclose the entity's process to identify, assess, and manage topic-related risks, and how these risks are integrated into the entity's overall risk management process. Each industry specific SASB Standard includes climate-related risks and opportunities that are likely to be material in a given industry.

BC188. The IR Framework[39] highlights that an integrated report should answer the following question: what are the specific risks and opportunities that affect the organisation's ability to create value over the short-, medium- and long-term, and how is the organisation dealing with them? Thus, an integrated report should identify the key risks and opportunities that are specific to the organisation, including those that relate to the organisation's effects on, and the continued availability, quality and affordability of, relevant capitals in the short-, medium- and long-term.

BC189. TCFD[40] recommends that an organisation should disclose how they identify, assess, and manage climate-related risks. TCFD argues that "investors and other stakeholders need to understand how an organization's climate-related risks are identified, assessed, and managed and whether those processes are integrated in existing risk management processes. Such information supports users of climate-related financial disclosures in evaluating the organization's overall risk profile and risk management activities." TCFD consequently recommends that organisations should describe "their risk management processes for identifying and assessing climate-related risks" (Risks and opportunities recommended disclosure a)); "the organization's processes for managing climate-related risks" (Risks and opportunities recommended disclosure b)); "how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management" (Risks and opportunities recommended disclosure c)).

BC190. GRI 201[41] requires reporting on financial implications and other risks and opportunities due to climate change, specifically "Financial implications and other risks and opportunities due to climate change".

BC191. GRI 305[42] specifies that the reporting organisation can identify other indirect (Scope 3) GHG emissions by assessing which of its activities' emissions contribute to climate change-related risks such as financial, regulatory, supply chain, product and customer, litigation, and reputational risks.

BC192. The CDP climate change 2021 questionnaire[43] requires information on "management processes" of risks and opportunities, including: if the organisation has a process for

[37] CDSB, "CDSB Framework for reporting environment & climate change information Advancing and aligning disclosure of environmental information in mainstream reports", December 2019. Available here.

[38] SASB Standards. Available here.

[39] IR Framework, January 2021. Available here.

[40] TCFD, "Final Report Recommendations of the Task Force on Climate-related Financial Disclosures", 2017, p. 21. Available here.

[41] GRI 201: Economic Performance 2016. Available here.

[42] GRI 305: Emissions 2016. Available here.

[43] CDP, "Climate Change Questionnaire", 2021. Available here.

WORKING PAPER

identifying, assessing, and responding to climate-related risks and opportunities; how it defines short-, medium- and long-term horizons; how it defines substantive financial or strategic impact on the business; the risk types that are considered in the organisation's climate-related risk assessments; if the organisation assesses the portfolio's exposure to climate-related risks and opportunities; if the organisation requests climate-related information from its clients and investees as part of the due diligence and/or risk assessment practices; and why the organisation does not have a process in place for identifying, assessing, and responding to climate-related risks and opportunities, and if it plans to introduce such a process in the future.

BC193. Additionally the CDP requires information on "risk disclosure" (including: if the organisation has identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business; the details of risks identified with the potential to have a substantive financial or strategic impact on the business; and if so why the organisation does not consider itself to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on the business) and "opportunity disclosure" (including: if the organisation has identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on the business, the details of opportunities identified with the potential to have a substantive financial or strategic impact on the business; and if so why the organisation does not consider to have climate-related opportunities).

Users' needs

BC194. In the draft CSRD[44], the EU Commission states that: "The primary users of sustainability information disclosed in companies' annual reports are investors and non-governmental organisations, social partners and other stakeholders. Investors, including asset managers, want to better understand the risks of, and opportunities afforded by, sustainability issues for their investments, as well as the impacts of those investments on people and the environment. Non-governmental organisations, social partners and other stakeholders want to hold undertakings to greater account for the impacts of their activities on people and the environment." (p. 1)

BC195. Regarding climate-related information, Recital 41 of the draft CSRD argues that "users are interested in knowing about undertakings' physical and transition risks, and about their resilience to different climate scenarios. They are also interested in the level and scope of greenhouse gas emissions and removals attributed to the undertaking, including the extent to which the undertaking uses offsets and the source of those offsets."

BC196. Different users require climate-related information for different purposes. Some users, like non-governmental organisations, may require information in order to assess whether an undertaking's impact on climate change is compatible with limiting global warming to 1.5 °C in line with the Paris Agreement. Investors, too, need climate-related information as assessment of an investee company's risks increasingly need to include assessments of the risks climate change poses to the undertaking's operations throughout the entire value chain. Physical assets may be located in places where climate change related events such as floodings, wildfires or severe storms occur more frequently. The value of some physical assets may deteriorate rapidly if the assets cannot be transformed in line with increasing regulatory or demand side focus on climate impact (stranded assets). And the undertaking may face the risk of severe reputational damage if the undertaking or it's suppliers become the target of critique because of the way in which climate impact is taken into consideration. Undertakings may also find themselves in a situation where they can gain competitive advantages of climate change, e.g. by adapting rapidly and better to climate change than competitors or by developing products or services that help society or other businesses to mitigate or adopt to climate change. Thus, the risks and opportunities that climate change and impacts on climate change represent is of increasing strategic importance for undertakings – over the short, medium and longer term – and therefore to investors.

[44] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

WORKING PAPER

BC197. The SFDR requirements for financial market participants aim to ensure that end investors receive proper information regarding how financial market participants integrate climate change and other sustainability issues into their investment decisions, and regarding investment products' climate and sustainability performance. The Capital Requirements Regulation ('CRR')[45] and the European Banking Authority ('EBA') require credit institutions to disclose their "processes to identify, measure and monitor activities and exposures (and collateral where applicable) sensitive to environmental risks, covering relevant transmission channels", the "implementation of risk tools for identification, measurement and management of environmental (climate change and other environmental) risks" and "the estimated impact of environmental risk on capital and liquidity risk profile". Investors are increasingly aware that sustainability issues can put the financial performance of companies at risk and, consequently, request information that can demonstrate how investee companies monitor and manage sustainability risks and opportunities in order to create value.

Conclusions

BC198. Due to their activities and business relationships most, if not all, undertakings contribute – to varying extents – to global climate change. Climate change will increasingly affect the operations of undertakings and their ability to create value, may it be through physical hazards induced by climate change or policy and market responses in the EU and beyond to limit climate change in line with the Paris Agreement. On the other hand, the transition to a low carbon economy and the need for climate change adaptation solution can also bring along opportunities, e.g. for undertakings offering products and services that contribute to climate change mitigation or adaptation.

BC199. There is a well-founded need among the public in general, and among investors, credit institutions and other stakeholders, who rely on an undertaking's ability to create value over the short-, medium- and long term, to understand how it impacts climate change, is exposed to climate-related transition and physical risks and identifies opportunities, including the value chain. To achieve such a comprehensive understanding, there is a need to create transparency on the principal impacts, risks and opportunities as such but also the processes the undertaking has implemented to identify, assess and manage them.

BC200. With the European Commission's Guidelines on reporting climate-related information and the global reporting frameworks, notably the recommendations of the TCFD, generally accepted reporting approaches for this information already exist and it is suggested to rely on these.

BC201. In summary, reporting on the impacts on climate change as well as climate-related risks and opportunities, covering own operations and the value chain, is considered to be material for all undertakings.

BC202. The identification, assessment and management of the adverse impacts on climate change reflect a part of an undertaking's climate-related due diligence process. Since due diligence as such is a cross-cutting concept, it is reflected in different sections of the Climate prototype working paper and the cross-cutting content standards on strategy (ESRS 2, 3 and 4). Information on the management of adverse impacts on climate change are further underpinned by disclosures on "Governance" and "Climate Policies". Actions to mitigate these adverse impacts are addressed in section "Climate Targets" and "Climate Action Plans and Dedicated Resources". Indicators to measure and monitor performance are covered under the respective Disclosure Requirements in the reporting area "Climate Performance Measurement".

BC203. The description of the undertaking's impacts on climate change is to a large extent covered by the reporting on Scope 1, 2 and 3 GHG emission under the reporting area "Climate Performance Measurement".

WORKING PAPER

[45] Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012. Available here.

Choice of specific disclosures

Processes to identify material climate-related impacts, risks and opportunities

BC204. **The [draft] standard includes the following Disclosure Requirement 5: "The undertaking shall disclose its processes to identify and assess its material:**

(a) climate-related impacts;

(b) climate-related physical risks and opportunities;

(c) climate-related transition risks and opportunities".

BC205. The disclosure aims to provide transparency on the approach an undertaking takes to identify and assess the climate-related impacts, risks and opportunities it needs to address, including those that are prioritised by the undertaking and monitored directly by the undertaking's highest governing bodies.

BC206. The undertaking should follow a systematic approach by first identifying a wide range of conceivable climate-related impacts, risks and opportunities that are subsequently assessed with defined criteria in order to determine the principal impacts, risks and opportunities. Reporting on the identification and assessment process will increase the reliability and credibility of the disclosed principal impacts, risks and opportunities. Furthermore, climate-related impacts, risks and opportunities for most sectors do not only occur in an undertaking's own operations, but also in the value chain. For this reason, an undertaking should provide transparency to which degree the identification and assessment process includes value chain considerations.

BC207. **Processes to identify climate-related impacts**: An undertaking's adverse impacts on climate change primarily, but not only, originate from its direct and indirect GHG-emissions (Scope 1, 2 and 3). Hence, the narrative disclosure to describe the processes for identifying and assessing the adverse and positive impacts on climate change should include a reference to the performance measurement section on GHG-emissions and align with the respective GHG accounting methodologies. However, in contrast to the quantitative reporting on GHG-emissions, the disclosure proposed here should provide insights in how the undertaking identified and assessed the sources of GHG-emissions under its own control and within its value chain and whether and how it considers additional impacts on climate change (e.g., emission of certain short-lived climate forcers or land use changes). In this regard, impacts of the undertaking on climate change can also be of positive nature, e.g., by providing products and services that contribute to the transition to a carbon neutral economy, and therefore encourages companies to also report how those positive impacts are identified and assessed.

BC208. **Processes to identify climate-related risks and opportunities**: It is suggested to separate disclosure by transition risks and opportunities and physical risks, due to the different ways in which they can affect the undertaking and its ability to create value. To provide stakeholders with a comprehensive picture and allow for an analysis of the robustness of the disclosed risks and opportunities under Disclosure Requirement 6, the undertaking shall explain details of the identification and assessment process, including, among others, how the screening process for risk and opportunity identification was conducted, the assessment criteria used and the reliance of the identification and assessment on a range of climate scenarios.

BC209. **Climate-related scenario analysis**: Undertakings will be affected by climate change and related policy responses in a variety of ways. How these effects will materialise, however, is subject to uncertainty. Climate-related scenario analysis is a highly useful tool for an undertaking to understand this uncertainty. It can reveal the transition and physical risks and opportunities the undertaking may face under different conceivable future situations, how these risks may affect financial performance and position and, consequently, support to assess and increase the resilience of its strategy and business model. Users should be able to gain an understanding of how climate-related scenario analysis has informed the risk and opportunity identification and assessment process. To ensure relevant outcomes, climate scenarios used for transition risks should include at least a 2°C and a 1.5°C

WORKING PAPER

scenario, if available on a sector specific basis, and for physical risks >2°C scenarios, if available on a regional level.

BC210. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD and the European Commission's Guidelines on reporting climate-related information. It is also compatible with TCFD and the IFRS/TRWG climate prototype. Article 19a (2) (e) of the CSRD asks undertakings to disclose "a description of the due diligence process implemented with regard to sustainability matters". The European Commission Guidelines on reporting climate-related information recommend to describe "the company's processes for identifying and assessing climate-related risks over the short, medium, and long term", as well as the "how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management". TCFD final report recommendations propose to "describe the organization's processes for identifying and assessing climate-related risks". IFRS climate-related disclosure prototype requires undertakings to disclose "the process by which climate-related risks are identified" and "the process, or processes, by which the entity assesses the significance of climate-related risks". CDP requires information on "management processes" of risks and opportunities.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Description of the processes to identify material climate impacts, risks and opportunities	Article 19a, 2. (e)	Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.4	TCFD, Final report recommendations (2017), Risk Management – Recommended disclosure (a) IFRS, Climate-related disclosure prototype (2021), Disclosure 11 (a) and (b) CDP, Questionnaire (2021), C2.1

Material climate-related impacts, risks and opportunities

BC211. **The [draft] standard includes the following Disclosure Requirement 6: "The undertaking shall disclose a description of its material:**

(a) climate-related impacts;

(b) climate-related physical risks and opportunities;

(c) **climate-related transition risks and opportunities". […]"**

BC212. The disclosure relates to the outcome of the identification and assessment processes of climate impacts, risks and opportunities from Disclosure Requirement 5 and suggests to list those that the undertaking has determined to be material. Stakeholders, in addition, need to understand the climate-related impacts, risks and opportunities that due to their importance to the undertaking are prioritised and monitored directly by the undertaking's highest governing bodies.

BC213. The financial effects related to principal climate-related risks and opportunities are addressed under the Disclosure Requirements 15 and 16.

BC214. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD, SFDR and European Commission's Guidelines on reporting climate-related information. It is also compatible with TCFD and IFRS/TRWG climate prototype. Article 19a (2) (e) and (f) of the CSRD requires to disclose a description of "the principal actual or potential adverse impacts connected with the undertaking's value chain, including its own

WORKING PAPER

operations, its products and services, its business relationships and its supply chain" and of "the principal risks to the undertaking related to sustainability matters, including the undertaking's principal dependencies on such matters, and how the undertaking manages those risks". Articles 4 and 6 of the SFDR require transparency from financial market participants on adverse sustainability impacts and the integration of sustainability risks, including climate-related risks, into their investment decisions. The European Commission Guidelines recommend to describe "the "principal climate-related risks the company has identified over the short, medium, and long term throughout the value chain". TCFD final report recommendations propose to "describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term". IFRS climate-related disclosure prototype requires undertakings to disclose "the significant climate-related risks and opportunities that are reasonably expected to affect the entity's business model, strategy and cash flows over the short, medium or long term". CDP requires information on "risk disclosure" and "opportunity disclosure".

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Material climate-related impacts, risks and opportunities	Article 19a, 2. (e) (ii) and (f)	SFDR, Articles 4 and 6 Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.4	TCFD, Final report recommendations (2017), Strategy – Recommended disclosure (a) IFRS, Climate-related disclosure prototype (2021), Disclosure 6 CDP, Questionnaire (2021), C2.3 and C2.4

WORKING PAPER

Climate-related Policies, targets, action plans and resources

BC215. The Disclosure Requirements related to policies and targets rely on the dedicated cross-cutting reference standard ESRS 5.

BC216. This section relates to the proposals on climate change mitigation and adaptation policies as well as climate-related targets. The aim of these Disclosure Requirements is to establish transparency for investors and other stakeholders on how policies and targets support the undertaking's strategic direction.

Climate Policies

EU legislation and recommendations

BC217. On 14 July 2021, the European Commission adopted a series of legislative proposals setting out how it intends to achieve climate neutrality in the EU by 2050, including the intermediate target of at least 55% net reduction in greenhouse gas emissions by 2030. This 'Fit-For-55' Package[46] proposes to revise several pieces of the EU climate legislation, including the European Union Emissions Trading System ('EU ETS'), Effort Sharing Regulation, and transport and land use legislation, setting out in real terms the ways in which the Commission intends to reach EU climate targets under the European Green Deal[47].

BC218. Article 19a of the draft CSRD[48] states that the management report shall contain "the plans of the undertaking to ensure that its business model and strategy are compatible with the transition to a sustainable economy and with the limiting of global warming to 1.5 °C in line with the Paris Agreement".

BC219. The European Commission's Guidelines on reporting climate-related information[49] define policy and due diligence as governance and control systems that are key to stakeholders' understanding of the robustness of a company's approach to climate-related issues.

BC220. The supplement furthermore states that disclosure of climate-related policy outcomes helps stakeholders monitor and assess a company's development, position, performance and impact as a result of its policies. In assessing its performance through targets setting and reporting against the targets, the company demonstrates the consistency of its strategy, actions, and decisions related to climate change.

BC221. The European Commission's Guidelines recommend to describe, among others, policies related to climate change, including any climate change mitigation or adaptation.

BC222. The European Commission's Strategy on Adaptation to Climate Change[50] states that it is vital for the private and public sectors to work together more closely, in particular on financing adaptation. The strategy, with the focus and the tools it provides, will support the private sector to identify risks and steer investment towards action on adaptation and resilience (and avoid maladaptation). By offering solutions to help meet the rising awareness of climate impacts (such as the non-financial disclosure obligations, the Taxonomy Regulation[51] for sustainable activities and the Renewed Sustainable Finance

WORKING PAPER

[46] Communication from the Commission 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality (C/2021/550). Available here.

[47] Communication from the Commission the European Green Deal (C/2019/640). Available here.

[48] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

[49] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

[50] Communication from the Commission Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate (COM/2021/82). Available here.

[51] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Taxonomy Regulation). Available here.

Strategy), it will help large companies, SMEs, local administrations, social partners, and the public.

BC223. The ECB[52] is of the view that institutions should take a forward-looking and comprehensive approach to considering climate-related and environmental risks. The ECB expects institutions to monitor and report their exposures to climate-related and environmental risks on the basis of their current data and forward-looking estimations. The ECB expects institutions to assign quantitative metrics to climate-related and environmental risks, particularly for physical and transition risks.

Global reporting frameworks

BC224. International Organisation for Standardisation ('ISO') 14001[52] defines environmental policies as "intentions and direction of an organisation related to environmental performance as formally expressed by its top management".

BC225. Regarding policy commitments, the GRI Universal Standards 2021[53] suggest that organisation should:

(a) describe its policy commitments for responsible business conduct;

(b) describe its specific policy commitment to respect human rights;

(c) provide links to the policy commitments if publicly available, or, if the policy commitments are not publicly available, explain the reason for this;

(d) report the level at which each of the policy commitments was approved within the organization, including whether this is the most senior level;

(e) report the extent to which the policy commitments apply to the organization's own activities and to its business relationships;

(f) describe how the policy commitments are communicated to workers, business partners, and other relevant parties (GRI 2, disclosure 2-23, p. 35).

BC226. The PTF-ESRS NFRS[54] argues in its final report that "policies are not only a formal, adopted and dated paper but include an operational implementation with defined related objectives, specific coverage of activities and an accountable person in oversight."

Users' needs

BC227. Investors and stakeholders are interested in an undertaking's climate-related policy commitment and (implementation) policies that demonstrate its commitment to climate change mitigation and adaptation. Disclosure on climate-related policies will help stakeholders understand the undertaking's ability to manage its physical and transition risks, limit its negative impacts on climate change and maximise its positive impacts throughout the value chain.

Conclusions

BC228. The Disclosure Requirement on policies relies on the cross-cutting reference [draft] ESRS 5 and the respective Basis for Conclusions.

BC229. There are different interpretations of the term 'policies' and that it can be either understood as formal commitments by an undertaking's leadership (e.g. GRI, ISO 14001/EMAS) or as overarching topic-specific implementation plans (e.g. PTF-NFRS, or TCFD's

WORKING PAPER

[52] ECB, "Guide on climate-related and environmental risks Supervisory expectations relating to risk management and disclosure", May 2020. Available here.

[53] GRI Universal Standards 2021. Available here.

[54] PTF NFRS, "Final Report Proposal for a Relevant and Dynamic EU Sustainability Reporting Standard-Setting", February 2021. Available here.

understanding of 'transition plans') including different elements (e.g. commitments, targets, action plans and performance metrics and monitoring).

BC230. Policies related to climate change mitigation and adaptation shall be disclosed separately as their goals, people involved, actions and resources needed to implement them are different.

BC231. An undertaking's transition plan, making reference to policies, GHG emission reduction targets, key actions and resources for the undertaking's transition to a climate-neutral economy and relevant metrics, should be reported on a high-level under the respective Disclosure Requirement in the reporting area "Strategy and business model".

Choice of specific disclosures

Policies implemented to manage climate change mitigation and adaptation

BC232. **The [draft] standard includes the following Disclosure Requirement 7: "The undertaking shall disclose a description of its policy for climate change mitigation and its policy for climate change adaptation".**

BC233. Undertakings should create transparency on all policy commitments in place regarding climate change mitigation and adaptation (e.g. stand-alone policy documents, codes of conduct, commitments to climate-related initiatives or alike). Stakeholders need to understand the undertaking's ability (i) to mitigate its negative impacts on climate change and to maximise its positive impact throughout the value chain and (ii) to monitor and manage its physical and transition risks and opportunities.

BC234. A separate disclosure for policies related to climate change mitigation and adaptation is recommended, as their goals, people involved, actions and resources needed to implement them are different. The disclosure of the undertaking's climate change mitigation policy relates to the reduction of GHG emissions through different decarbonisation levers and specific actions (investments in electrification, energy efficiency, renewable energy deployment or low-carbon product development). The undertaking's policies for climate change adaptation relate to managing the undertaking's climate-related physical and transition risks and vulnerability.

BC235. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD and European Commission's Guidelines on reporting climate-related information. It is also compatible with TCFD and IFRS. Article 19a 2 (d) of the CSRD asks a "description of the undertaking's policies in relation to sustainability matters". The Commission Guidelines on non-financial reporting demand a description of "any company policies related to climate, including any climate change mitigation or adaptation policy". Although TCFD and IFRS don't use the term of "climate policies", this subtopic is indirectly covered by both frameworks. TCFD asks for the description of the undertaking's "processes for managing climate-related risks, including how they make decisions to mitigate, transfer, accept, or control those risks". IFRS asks undertakings to describe "for each significant climate-related risk, information that enables an understanding of how the risk is being monitored, managed, and mitigated, including related policies".

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Policies implemented to manage climate change mitigation and adaptation	Article 19a, 2. (d)	Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended	TCFD, Final Report Recommendations (2017), Risk management – Recommended disclosure (b) IFRS, Climate-related Disclosure Prototype

WORKING PAPER

		disclosures and further guidance 3.2	(2021), Disclosure 11 (c)

Climate Targets

EU legislation and recommendations

BC236. The European Commission has released its "Fit for 55" legislation package[55], supporting its commitment to reduce net greenhouse gas emissions by at least 55 per cent by 2030. The package presents a policy action plan on how to reach Europe's climate targets including the increased use of renewable energy and greater energy efficiency.

BC237. The European Commission has released its "EU climate adaptation strategy"[56] supporting its commitment to build a more resilient tomorrow and present adaptation actions and targets to better prepare EU to extreme weather and climate change.

BC238. The EU aims to be climate-neutral by 2050 an economy with net-zero greenhouse gas emissions. This objective is at the heart of the European Green Deal[57] and in line with the EU's commitment to global climate action under the Paris Agreement.

BC239. Article 19a (2) lit. b) of the draft CSRD requires "a description of the targets related to sustainability matters set by the undertaking and of the progress the undertaking has made towards achieving those targets" [58].

BC240. The European Commission's Guidelines on reporting climate-related information recommend describing any climate-related targets the company has set as part of its policies, especially any GHG emissions targets, and how company targets relate to national and international targets and to the Paris Agreement in particular. Recommended key performance indicators are:

(a) Companies should describe whether their target(s) relate to their Scope 1, Scope 2 and/or Scope 3 GHG emissions in either full or in part.

(b) Companies should describe the development of GHG emissions against the targets set

(c) Companies should consider setting targets for 2025 or 2030 and review them every five years.

(d) Companies may also consider setting a target for 2050 to align with the Paris Agreement.

(e) Companies should, where appropriate, consider disclosing GHG emissions targets by country or region (including the EU), by business activity, and by subsidiary.

(f) Companies may consider disclosing an additional intensity target expressed in metric tonnes CO_2e per business metric or % reduction of intensity metric, from a base year.[59]

WORKING PAPER

[55] Communication from the Commission 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality (C/2021/550). Available here.

[56] Communication from the Commission: Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change. Available here.

[57] Communication from the Commission the European Green Deal (C/2019/640). Available here.

[58] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

[59] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

BC241. In the EU Climate Benchmark Regulation[60], Article 6 states that administrators of EU Climate Transition Benchmarks and administrators of EU Paris-aligned Benchmarks may increase in those benchmarks the weight of the issuers of the constituent securities that set and publish GHG emission reduction targets, where the following conditions are fulfilled:

(a) the issuers of the constituent securities publish consistently and accurately their Scope 1, 2 and 3 GHG emissions;

(b) the issuers of the constituent securities have reduced their GHG intensity or, where applicable, their absolute GHG emissions, including Scope 1, 2 and 3 GHG emissions, by an average of at least 7 % per annum for at least three**.**

BC242. The European EMAS Regulation[61] requires organisations that participate in EMAS to report on the "environmental objectives and targets in relation to the significant environmental aspects and impacts".

Global reporting frameworks

BC243. The climate-related disclosures prototype developed by the TRWG of the IFRS[62] proposes Disclosure Requirements on governance with the objective to understand the entity's performance in managing significant climate-related risks and opportunities. Consequently, the prototype suggests to disclose:

(a) "the targets set by management to mitigate or adapt to climate-related risks or maximise climate-related opportunities; and

(b) other key performance indicators used by the board or management to measure progress towards the targets identified".

BC244. The TRWG of the IFRS specifies that the entity shall disclose climate-related targets, including:

(a) "the objective of the targets (for example, mitigation, adaptation and conformance with sector and science-based initiatives);

(b) whether the target is absolute or intensity-based;

(c) whether the target is science-based, and if so, whether it has been validated by a third party;

(d) whether the target was derived using a sectoral decarbonisation approach;

(e) the timeframe over which the target applies;

(f) the base year from which progress is measured;

(g) any milestones or interim targets; and

(h) metrics used to assess progress towards reaching targets and achieving strategic goals".

BC245. TCFD[63] recommends companies to describe the targets used by the organisation to assess and manage climate related risks and opportunities and performance against targets. It specifies that "investors and other stakeholders need to understand how an organisation measures and monitors its climate-related risks and opportunities" as "access to the metrics and targets used by an organisation allows investors and other stakeholders

WORKING PAPER

[60] Commission Delegated Regulation (EU) 2020/1818 of July 2020 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks. Available here.

[61] Commission Regulation (EU) 2018/2026 of 19 December 2018 amending Annex IV to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS). Available here.

[62] TRWG of the IFRS, "Climate-related disclosures prototype", November 2021. Available here.

[63] TCFD, "Final Report Recommendations of the Task Force on Climate-related Financial Disclosures", 2017, p. 22. Available here.

to better assess the organisation's potential risk-adjusted returns, ability to meet financial obligations, general exposure to climate-related issues, and progress in managing or adapting to those issues".

BC246. In the "Guidance on Metrics, Targets, and Transition Plans"[64], TCFD proposes a set of principles for setting climate-related targets (based on recognized metrics; quantified and granular; designed in consideration of an organization's strategy and forecasting and informed notably by scenario analysis and climate science; clearly specified over time with baseline, time horizon, interim targets; reviewed and updated; reported annually).

BC247. The CDP[65] states that an absolute target describes a reduction in actual emissions in a future year when compared to a base year. The target can relate to Scope 1, Scope 2 and/or Scope 3 emissions in full or in part. The CDP asks companies to describe details of emissions target(s) in absolute and/or intensity as well progress made against those target(s).

BC248. The Science Based Target initiative ('SBTi') in its 2021 guideline[66] urges corporates to aim for the highest level of ambition in their target setting. The Business Ambition for 1.5°C campaign is an urgent call-to-action campaign led by the SBTi, UN Global Compact, and We Mean Business calling for companies to set emissions reduction targets in line with limiting global warming to 1.5°C.

BC249. According to the SBTi manual 2021[67], undertaking should set climate-related targets based on the following requirements:

(a) Cover a minimum of 5 years and a maximum of 15 years

(b) Ensure the target boundary is aligned with the GHG inventory boundary

(c) Determine how to treat subsidiaries, parent companies must set SBTs for subsidiaries in accordance with the selected organisational boundary approach

(d) Exclude the use of offsets

(e) Exclude avoided emissions

(f) If Scope 3 emissions compose over 40% of total Scope 1, 2, and 3 emissions companies shall develop ambitious scope 3 targets that collectively cover at least two-thirds scope 3 emissions

BC250. The SBTi argues that absolute and intensity targets have advantages and disadvantages: "Intensity targets do not necessarily lead to reductions in absolute emissions. This is because increases in business output can cause absolute emissions to rise even if efficiency improves on a per-unit basis. Absolute targets also have some shortcomings. They do not allow comparisons of GHG intensity amongst peers, and they do not necessarily track with efficiency improvements, as reported reductions can result from declines in production output, rather than improvements in performance."[68]

BC251. According to the UN Net Zero Banking Alliance, financial undertakings set climate-related targets based on the following principles that should also be kept in mind for non-financial undertakings:

(a) Banks shall set a 2050 target to support meeting the temperature goals of the Paris Agreement.

(b) Banks shall set an interim target for 2030 or sooner and may set further interim targets prior to that date.

WORKING PAPER

[64] TCFD, "Guidance on Metrics, Targets, and Transition Plans", October 2021. Available here.

[65] CDP, "Climate Change Questionnaire", 2021. Available here.

[66] SBTi, "SBTi's Criteria and Recommendations", April 2021. Available here.

[67] SBTi, "SBTi Corporate Manual", June 2021. Available here.

[68] Ibid. p. 31.

(c) Targets have been set in absolute emissions; and Portfolio-wide emissions intensity (e.g. CO_2e/$ lent or invested); and Sector-specific emissions intensity (e.g. CO_2e/metric).

(d) The scenarios and target trajectory used by the undertaking could also come from credible and well-recognised sources and undertakings should provide rationale for the scenario(s) chosen.

(i) IPCC scenarios and scenarios derived from IPCC-qualifying models

(ii) Scenarios such as the International Energy Agency ('IEA') scenarios (e.g. NZE2050 scenarios) or sector-specific scenarios (such as the shipping decarbonisation trajectories developed under the Poseidon Principles)

(iii) The scenarios selected shall be "no-overshoot" or "low-overshoot" scenarios (e.g. scenarios P1 and P2 of the IPCC).

(iv) The scenarios selected shall rely conservatively on negative emissions technologies.

(v) The scenarios selected shall have reasonable assumptions on carbon sequestration achieved through nature-based solutions and land use change.

(vi) Undertakings shall disclose which scenario their climate targets are based upon (scenario name, date and provider).

(vii) The scenarios selected shall, where possible, minimise misalignment with other Sustainable Development Goals ('SDGs') - (e.g. P4 of the IPCC not aligned with Biodiversity issue and food security).

BC252. The SBTi Foundations for science-based net-zero target setting in the corporate sector[69] state that "the growth in corporate net-zero targets is an important signal of growing ambition to fight climate change in the economy […]. While many companies have set targets to reach net zero emissions, they have interpreted the goal in a variety of ways. Some companies have set targets that require deep emission reductions across the value chain and shifting to a business model that is compatible with a net-zero economy. Others have set targets that entail modest emission reductions and heavier reliance on offsetting practices. With this heterogeneous landscape of net-zero targets, it is difficult for stakeholders to assess or to compare net-zero targets and to understand the implications of such targets."

BC253. The SBTi resulting Corporate net-zero standard[70] outlines that reaching a state of net-zero emissions consistent with limit warming to 1.5°C involves two conditions:

(a) achieving a scale of value chain emissions reductions consistent with the depth of abatement at the point of reaching global net-zero in 1.5˚C pathways and

(b) neutralizing the impact of any residual emissions by permanently removing an equivalent volume of carbon dioxide.

BC254. The standard states that "while companies may reach a balance between emissions and removals before they reach the depth of decarbonization required to limit warming to 1.5ºC, this is a transient state on the journey to net-zero emissions".

BC255. GRI 305 (2016)[71] states that "when reporting on GHG emissions targets, the reporting organization shall explain whether offsets were used to meet the targets, including the type, amount, criteria or scheme of which the offsets are part."

BC256. An ISO working group is currently developing the standard ISO 14068 "Greenhouse gas management and related activities — Carbon neutrality" which aims to provide more clarity on carbon neutrality definitions and concepts at organizational, product or project level.

BC257. The NZI Guideline states couple of principle regarding net zero GHG emissions target:

WORKING PAPER

[69] SBTi, "Foundations for Science-based Net-zero Target Setting in the Corporate Sector", 2020, p. 13. Available here.

[70] SBTi, "Corporate net-zero standard" (2021). Available here.

[71] GRI 305: Emissions (2016). Available here.

BC258. The Net Zero Initiative provides organisations with a way to describe and organize their climate action to maximize their contribution within achieving global carbon neutrality. The framework is based on several key principles:

(a) The word 'carbon neutrality' (or 'net zero') refers only to the global goal of balancing the emissions and removals. It does not apply to an organisation.

(b) Organisations can only contribute to the trajectory towards global carbon neutrality.

(c) Emission reductions and negative emissions (also called 'removals') are rigorously distinguished and counted separately.

(d) The concept of 'contribution to global neutrality' is broadened to include the marketing of low-carbon products and services. "Avoided emissions" are separated into two groups: those that correspond to a real absolute decrease in the level of emissions, and those that provide only a "smaller increase" compared to the initial situation.

(e) Carbon finance can trigger avoided or negative emissions, but it cannot "cancel" the company's operational emissions; it has to have a separate account for this.

Conclusions

BC259. All undertakings shall report whether they have set GHG emissions reduction targets in absolute Scope 1, Scope 2, and significant categories of Scope 3 emissions, in line with the draft CSRD and the target of 55% net reduction by 2030 as well as the objective of climate neutrality by 2050.

BC260. When emissions reduction targets are disclosed, they shall follow common rules that are elaborated upon hereafter to foster comparability, as far as possible.

BC261. The concept of net zero GHG emissions is principally designed to be applied at global or sub-global scales but acknowledges attempts to define methodologies to determine net-zero / carbon neutrality at an entity level. There is not yet consensus on the definition and methodologies for assessing climate neutrality and net zero emissions at the entity level, but the SBTi Net-zero standard is the most mature approach to date.

BC262. Further guidelines on sector carbon budgets, related emissions scenarios and allocation approaches to undertaking would be helpful for undertakings to set and disclose net-zero targets.

Choice of specific disclosures

Measurable targets for climate change mitigation and adaptation

BC263. **The [draft] standard includes the following Disclosure Requirement 8: "The undertaking shall disclose its adopted climate-related targets".**

BC264. This Disclosure Requirement relies on two levels of information. The first level relates to general climate-related targets that an undertaking shall disclose such as targets for climate mitigation including energy efficiency improvement, renewables development, GHG emissions reduction and/or net zero, as well as for climate adaptation. The second level focuses specifically on GHG emission reduction targets as defining quantified emissions reduction targets is a key step for undertakings to conduct an effective transition towards global net zero. These GHG emissions reduction targets should be set on the total GHG emissions (scope 1, 2 or scope 1,2 and 3).

BC265. Regarding climate mitigation targets, stakeholders need to understand the GHG emission reductions that the undertaking intends to achieve in the future and their effectiveness in ensuring compatibility with limiting global warming to 1.5 °C. Regarding climate change adaptation targets, stakeholders need to understand how the undertaking manages physical risks resulting from climate change and reduces its vulnerability to these risks. Thus, targets for climate change mitigation and adaptation are valuable forward-looking information that undertakings shall disclose. Both rely on modelling efforts that require a

WORKING PAPER

deep integrated thinking on the business model, the market demand evolution, the products carbon intensity performance, and the sourcing strategy, etc.

BC266. Undertakings disclosing targets for climate change mitigation and adaptation shall follow consistent rules to become more comparable, which is even more important for GHG emissions reduction targets. General information on targets disclosing will be provided in the Basis for Conclusions of ESRS 5.

BC267. **Base year**: For comparability and reliability reasons, if the undertaking discloses an emission reduction target, it is suggested that the undertaking should select a recent base year preceding the first reporting year of the new target period by a maximum of 3 years. For example, for 2030 as the target year and a target period between 2025 and 2030, the base year should be selected between 2022 and 2025. Using a similar period duration and a recent base year should strengthen comparability of the planned or achieved reductions during that period. If the reductions were started earlier, the disclosure of past emissions (before the base year if comparable) should complete the picture to highlight early achieved reductions.

BC268. **Target years**: To be aligned with the EU targets (-55% in 2030 and climate neutrality in 2050) and for comparability reasons, if the undertaking discloses an emissions reduction target, the target years should be 2030 and 2050 with milestones every 5 years from 2025 to 2050. Five years is considered an acceptable and comparable timeframe to implement management plans and monitor improvements in line with the public policies milestones.

BC269. **Absolute and intensity values**: Undertakings shall disclose whether their targets have been set in absolute or intensity value. Absolute values should be prioritised because absolute reductions of GHG emissions are primary to achieve the EU target of climate neutrality. But for some growth sectors answering society needs like housing construction, reductions in absolute value may not be achievable in the short-term and a reduction in intensity terms would also be welcomed. Therefore, depending on their sectors, undertakings should report targets on Scope 1, 2 and 3 in intensity terms provided that a comparable denominator (reference value, e.g., tonnes of product) exists and is relevant. The relevance of the activity intensity ratios relies on the sectors. For instance, the activity denominator of the cement industry could be tonne of clinker or cement when a relevant common activity denominator for consumer goods industries with a large range of products will be more difficult to define. Undertakings disclosing GHG intensity ratios should be able to set targets in intensity terms and to translate them in absolute terms (which might be increases rather than reductions if the growth volume is higher than the intensity decrease). In other cases, both are usually complementary as intensity targets allow for comparison overtime whatever the perimeter evolutions.

BC270. **Scope 1, 2 and 3 GHG emissions**: The scope of the GHG emissions reduction targets between Scope 1 and 2 and Scope 3 should be clearly specified and preferably be disclosed separately. Scope 1 and 2 are emissions under the control of the undertaking when Scope 3 emissions are often depending on the business partners and rely on estimates (emissions sources and data are not under the control of the undertaking for most categories of Scope 3). Moreover, uncertainties associated with scope 3 categories estimates (due to limited reliability and precision) may be important in comparison with the planned reduction limiting the value of monitoring it.

BC271. **Past achievements**: In the context of targets set over rolling period of 5 years and for comparability reasons between early movers and beginners, undertakings should report their past achievements on the Scope 1 and 2 GHG emission reduction provided that they are available and comparable in terms of scope and reliability with the current rolling period. This would allow early movers to demonstrate the progress already achieved. If such a disclosure would be deemed meaningful, undertakings should disclose the GHG emissions in the initial baseline year and the percentage of reduction achieved until the new baseline year.

BC272. **Decarbonisation levers**: Undertakings should report their GHG emission targets (both absolute and, if relevant, intensity) by decarbonisation lever to demonstrate the robustness of the decarbonisation trajectory and how it has been operationalised (see also transition plan in "Strategy" and climate mitigation action plans in "Action plans" for more information). Most frequent levers of decarbonisation may be:

WORKING PAPER

(a) Increase the use of renewable energy,

(b) Improve energy efficiency of industrial processes,

(c) Reduce energy consumption of buildings,

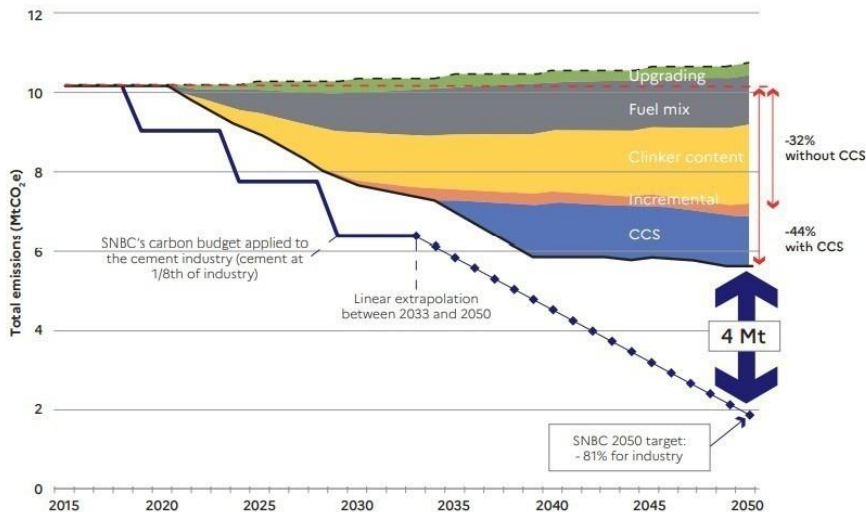
(d) Switch the fleet to low carbon vehicles,

(e) Reduce Carbon footprint of supply chain,

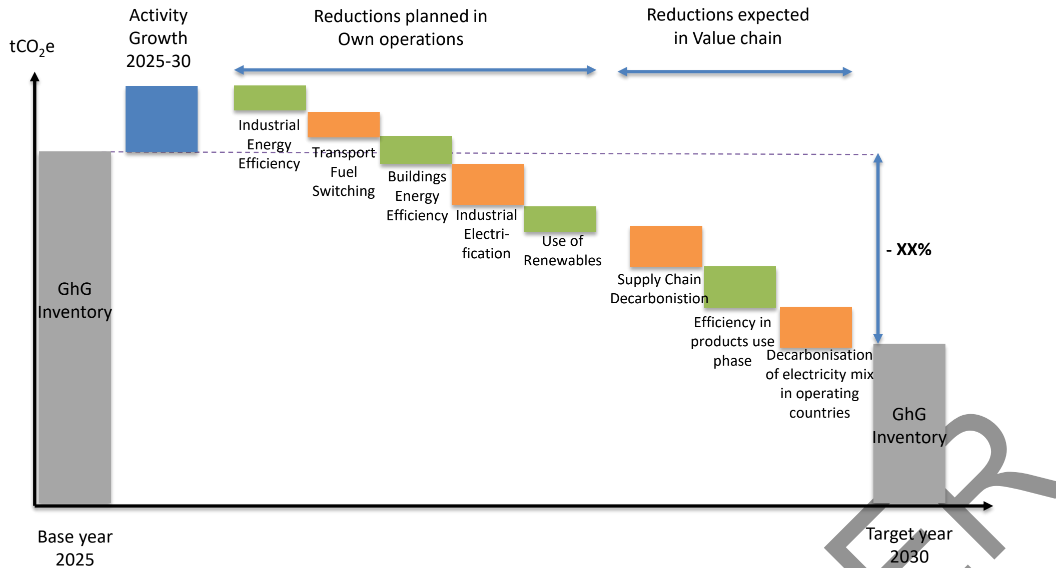
(f) Reduce Carbon footprint of products,

(g) Reduce business travels, etc.

BC273. **Decarbonisation trajectory**: Undertakings should report GHG emission reduction targets in absolute value over the forward-looking period between base year and target year with all milestones and with a clear reference to the 1.5°C scenario (preferably sectoral rather than contraction) or net zero target in a graphical way. These figures should be translated in a graph aiming at gathering all data points to build a decarbonisation trajectory or roadmap towards alignment with 1.5°C or net zero or neutrality. See hereafter illustrative examples from the cement sector mixing milestones and levers concerning the French National Strategy[72] and a waterfall scheme between the current emissions and 2030 targets.



[72] Illustrative example of the French cement sector compared to the national target from EU Life ClimAct Project on Sectoral Transition Plan. Available here.



BC274. **Net zero targets**: Although there is not yet consensus on the definition and methodologies for assessing climate neutrality and net zero emissions at enterprise level, and while international debates are ongoing (e.g., under the UNFCCC Race to zero, the SBTi, CDP or ISO), an increasing number of undertakings commit themselves to net-zero and climate neutrality. There is a need for transparency on the credibility of those commitments to avoid greenwashing. Therefore, undertakings should disclose whether a net zero or neutrality target has been set (on top of GHG emissions reduction targets), what the target year is and what the perimeter, calculation assumptions and levers to achieve it are. Specifically, undertakings should be transparent on the role of voluntary offsets.

BC275. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD and European Commission's Guidelines on reporting climate-related information. It is also compatible with TCFD, IFRS, CDP. It builds upon the Science Based Target initiative. Article 19a 2 (b) of the CSRD requires "a description of the targets related to sustainability matters set by the undertaking and of the progress the undertaking has made towards achieving those targets". The European Commission Guidelines on non-financial reporting recommend the description of "any climate-related targets the company has set as part of its policies, especially any GHG emissions targets, and how company targets relate to national and international targets and to the Paris Agreement in particular". TCFD final report recommendations propose organisations to disclose the "targets used by the organization to manage climate-related risks and opportunities and performance against targets". IFRS climate-related disclosure prototype encourages the disclosure of the "targets set by management to mitigate or adapt to climate-related risks or maximise climate-related opportunities". CDP asks details on the absolute emissions target(s), the emissions intensity target(s) and any other climate-related targets.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Measurable targets for climate change mitigation and adaptation	Article 19a, 2. (d)	Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.2	TCFD, Final Report Recommendations (2017), Metrics and targets – Recommended disclosure (c) IFRS, Climate-related Disclosure Prototype (2021), Disclosures 12 (c) and (d) and 15

WORKING PAPER

			CDP, Questionnaire (2021), C4.1a, b and c Science Based Target Initiative

BC276. **Application provisions**: Even if targets are considered as forward-looking information, it does not make sense to defer the related disclosure application of one year to reduce the reporting burden. The disclosure of measurable targets for climate change mitigation and adaptation is only a requirement to disclose its adopted climate-related targets and not to adopt such targets. Therefore, undertakings that do not have climate-related targets will simply disclose they do not have climate-related targets (zero reporting).

Disclosure Requirements to be considered in future sets of standards

BC277. Other Disclosure Requirements on energy and climate-related targets have been considered and may be retained in future sets of standards to address specific EU policy objectives particularly in relation to buildings and transport energy efficiency and carbon intensity:

(a) Activity energy intensity for undertakings belonging to the high GHG-emission sectors as defined above (expressed in kWh/unit of production)

(b) Offices energy intensity for all undertakings (offices buildings occupied as tenant or owner expressed in kWh/m2)

(c) Carbon intensity of the undertaking's tertiary activities (occupied offices buildings and business travels expressed as kg CO_2e/FTE)

(d) Carbon intensity of the undertaking's logistics (transportation of goods expressed in t CO_2e/tonnes of goods transported, covering tier 1 upstream and downstream, paid or not paid transportation)

BC278. These targets on offices and transport may be relevant for undertakings not belonging to high emissions sectors as they all occupy offices and transport goods or employees; these targets should probably be developed under the sector specific approach.

WORKING PAPER

Climate Actions Plans and Dedicated Resources

BC279. The Disclosure Requirements related to action plans and resources rely on the dedicated cross-cutting reference standard ESRS 5.

BC280. This section relates to the proposals on mitigation actions and resources to achieve GHG emission reduction targets as well as adaptation actions and resources to manage physical climate risks. The aim is to establish transparency for investors and other stakeholders on what key actions the undertaking has planned and implemented to achieve its GHG emission targets, manage its transition and physical risks and consequently support its climate-related strategy.

Background

BC281. The transition to a climate-neutral society necessitates urgent actions to transform the energy system, including for use in buildings, transports and industry processes, as well as to increase the share of renewable energy production.

BC282. Many buildings are still heated with outdated systems that use polluting fossil fuels such as coal and oil. In particular, the number of deep renovations addressing building shells, relying on smart digitalisation and integrating renewable energy, need to increase substantially.

BC283. All transports – road, rail, aviation and waterborne transport – will have to contribute to the 55% reduction effort[73]. A combination of efficiency improvements to vehicles/vessels/aircrafts, fuel mix changes, greater use of sustainable transport modes and multi-modal solutions, digitalisation for smart traffic and mobility management can reduce GHG emissions and at the same time significantly address noise pollution and improve air quality.

BC284. Best practices in industry processes can further reduce GHG emissions, thus improving overall efficiency, by using waste heat and increasing electrification through continued incremental improvements or increasing circularity. However, to allow industry to truly decarbonise after 2030, hydrogen and carbon capture, utilisation and storage will need to be developed and tested at scale during the 2020s.

BC285. Last but not least, chronic or acute shifts in climate patterns can result in interruptions to or limitations on production capacity or early curtailment of operating facilities, thus having a direct and/or indirect financial impact on many companies.

EU legislation and recommendations

BC286. The EU launched in 2019 the European Green Deal[74] with the aim to tackle current climate and environmental challenges. As one of the key elements of the European Green Deal, the European Climate Law enshrines the EU's commitment to reaching climate neutrality by 2050 and the intermediate target of reducing net GHG emissions by at least 55% by 2030, compared to 1990. A climate-neutral transition can only be accomplished with contributions from all stakeholders, and especially from corporate players, which will have to design robust and coherent transition plans and to allocate sufficient human and financial resources to achieve their targets. In parallel to mitigation actions, the EU is taking action on climate adaptation to address the unavoidable impacts of climate change. In particular, the EU Strategy on Climate Adaptation[75] aims at making Europe a climate-resilient society by 2050.

WORKING PAPER

[73] Communication from the Commission 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality (C/2021/550). Available here.

[74] Communication from the Commission the European Green Deal (C/2019/640). Available here.

[75] Communication COM/2021/82 from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Forging a climate-resilient Europe – the new EU Strategy on Adaptation to Climate Change. Available here.

BC287. Article 19a (e) of the draft CSRD[76] requires entities to disclose “a description of any actions taken, […], to prevent, mitigate or remediate [actual or potential adverse impacts]”.

BC288. Under the Taxonomy Regulation[77], non-financial undertakings shall disclose the part of their CapEx and operating expenditure (‘OpEx’) which contributes to climate mitigation and adaptation objectives. The capital expenditure shall relate to assets or processes that are associated with Taxonomy-aligned economic activities, that are part of a plan to expand Taxonomy-aligned economic activities or to allow Taxonomy-eligible economic activities to become Taxonomy-aligned (‘CapEx plan’) within a 5 year timeframe or that are related to the purchase of output from Taxonomy-aligned economic activities, provided that such measures are implemented and operational within 18 months.

BC289. Non-financial undertakings shall disclose the key information about each of their CapEx plans when the plan aims to expand the undertaking’s Taxonomy-aligned economic activities. The CapEx plan shall be approved by the non-financial undertaking’s Management Board.

BC290. Annex II of the EMAS Regulation[78] requires organisations that participate in EMAS when planning how to achieve its environmental objectives, to determine:

(a) what will be done,

(b) what resources will be required,

(c) who will be responsible,

(d) when it will be completed.

BC291. Annex IV of the EMAS Regulation[79] requires organisations that participate in EMAS to report on the actions implemented and planned to improve environmental performance, achieve the objectives and targets and ensure compliance with legal requirements related to the environment

BC292. The European Commission’s Guidelines on reporting climate-related information[80] recommend describing the opportunities related to resource efficiency and cost savings, the adoption of low-emission energy sources, the development of new products and services, access to new markets, and building resilience along the value chain. As part of the disclosure on policies and due diligence processes, the guidelines also advise describing any public policy engagement on climate-related issues undertaken by the company, including membership of any relevant organisations or interest groups.

Global reporting frameworks

BC293. The climate-related disclosures prototype developed by the TRWG of the IFRS[81] introduces the following cross-industry metric related to action plans and resources, without detailing the calculation methods:

WORKING PAPER

[76] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

[77] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Taxonomy Regulation). Available here.

[78] Commission Regulation (EU) 2018/2026 of 19 December 2018 amending Annex IV to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme. Available here.

[79] Commission Regulation (EU) 2017/1505 of 28 August 2017 amending Annexes I, II and III to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme. Available here.

[80] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

[81] TRWG of the IFRS, “Climate-related disclosures prototype”, November 2021. Available here.

(a) "capital deployment – the amount of capital expenditure, financing or investment deployed toward climate-related risks and opportunities, expressed in the reporting currency".

BC294. TCFD's guidance on metrics, targets and transition plans[82] identifies several Transition Plan Elements that entities should consider disclosing (Table E1 Transition Plan Elements with TCFD pillars), covering both qualitative and quantitative elements. It should be especially designed in consideration of, and in order to, achieve targets within defined time horizons. Progress should be regularly tracked against these targets as well as any other metrics.

(a) Action plans: Organisations set short-term and medium-term tactical and operating action plans that are aligned with, and support, the strategic elements in their transition planning

(i) Overview of current and planned initiatives to reduce climate-related risks and increase climate-related opportunities

(ii) Articulation of, and progress against, targets outlining proportion of assets and/or operating, investing, or financing activities aligned toward climate-related opportunities, based on key categories of commonly accepted opportunities

(b) Financial plans: Transition plan clearly articulates investments and other financial implications in supporting financial plans and budgets

(i) Articulation of, and progress against, climate-related targets outlining amount of expenditure or capital investment deployed toward climate risks and opportunities

(ii) Articulation of how expenditure or capital investment supports decarbonisation strategy

BC295. The transition plan shall also identify risks that the organisation faces from a transition to a low-carbon economy and include detailed action plans for minimising risks to a successful implementation of the transition plan.

BC296. The CDP in its 2021 questionnaire[83] requires companies to break down their CapEx and R&D investment by products, production methods, technologies (depending on sector of activities) and this breakdown should accompany their action plan.

BC297. GRI 103[84] states that companies should describe the resources allocated to their action plan and all relevant specific actions such as processes, projects, programmes and initiatives.

Users' needs

BC298. Investors and data users are interested in forward-looking strategies, action plans and financial decisions that are driven by their climate policies and targets. In particular, when a company develops a low-carbon action plan this provides certainty to investors and other stakeholders that the company is adhering to its short-, medium- and long-term climate goals and that its business model will continue to be relevant in a net-zero carbon economy. Disclosing resources allocated to such action plans enable investors and data users to assess their reliability and robustness.

Conclusions

BC299. The disclosure by undertakings of their action plans and associated resources (i.e., human resources and financial planning) gives credibility to their comments and demonstrates that policies and targets are concretely translated in their operational and financial processes as well as to conduct an open dialogue with the public and other interested parties.

[82] TCFD, "Guidance on Metrics, Targets, and Transition Plans", October 2021. Available here.

[83] CDP, "Climate Change Questionnaire", 2021. Available here.

[84] GRI 103: Management Approach (2016). Available here.

WORKING PAPER

BC300. For clarity reasons and fore the reasons as for policies, it is recommended that undertakings should split their mitigation and adaption actions and resources.

BC301. It is also suggested that the levers of decarbonisation in the “Targets” section and the key actions in the “Action Plans & Resources” section with their contribution to the achievement of emissions reduction target should be the same.

BC302. The disclosure of resources dedicated to these actions should include CapEx and potentially OpEx in order to be coherent but not limited or restricted to the Taxonomy Regulation’s Article 8 disclosures.

Choice of specific disclosures

Climate change mitigation and adaptation action plans

BC303. **The [draft] standard includes the following Disclosure Requirement 9: “The undertaking shall disclose its climate change mitigation and adaptation action plans”.**

BC304. Undertakings disclosing climate change mitigation and adaptation action plans shall follow consistent rules to become more comparable. General information on action plans will be provided in the Basis for Conclusions of ESRS 5.

BC305. **List of key actions**: For coherence and clarity, the description of key actions shall be linked to major risks and opportunities disclosed in the “Impacts, Risks and Opportunities” section, as well as to the levers of decarbonisation disclosed in the “Targets” section. The list of actions shows the holistic approach of the undertaking to reduce GHG emissions and limit climate change.

BC306. **Time horizon**: The period during which each key action is intended to be implemented is another precision that demonstrates that actions are embedded into the business planning.

BC307. **Expected outcomes**: The expected outcomes aim at clarifying how the undertaking intends to achieve its GHG emission reduction target. This disclosure demonstrates the modelling effort performed by the undertaking and the seriousness of the roadmap. The expected outcomes may depend on many external factors and this forward-looking information is rather indicative. But with expected outcomes, the target is no longer a top-down decision for communication purposes, it becomes a strategic plan embedded into the business planning and operations.

BC308. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD and European Commission’s Guidelines on reporting climate-related information. It is also compatible with TCFD, IFRS, CDP. Article 19a 2 (e) (iii) of the CSRD requires a description of any actions taken, […], to prevent, mitigate or remediate [actual or potential adverse impacts]”. The Commission Guidelines on non-financial reporting recommend that the company should demonstrate the consistency of its actions related to climate change in assessing its performance through target setting and reporting against the targets. TCFD and IFRS don't use the terms of "action plans" and indirectly cover the subtopic. TCFD guidance on metrics, targets and transition plans ask for the description of "adaptation and mitigation activities". More particularly, it asks for "specific activities intended to reduce GHG emissions in their operations and value chain or to otherwise support the transition". IFRS climate prototype requires to disclose “what direct adaptation and mitigation efforts [the organisation] is undertaking”, mentioning the examples of “workforce, changes in materials used or product specifications, or introduction of efficiency measures”, and “what indirect adaptation and mitigation efforts it is undertaking”, referring to the examples of “working with customers and supply chains or use of certification schemes (for example, an internationally recognised scheme providing certification for the sustainability of a commodity such as lumber or palm oil)”.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility

WORKING PAPER

Climate change mitigation and adaptation action plans	Article 19a, 2. (e) (iii)	Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.3	TCFD, Final Report Recommendations (2017), Strategy – Recommended disclosure (b) IFRS, Climate-related Disclosure Prototype (2021), Disclosure 8 (a) (iv) and (v)

Resources allocated to climate change mitigation and adaptation action plans

BC309. **The [draft] standard includes the following Disclosure Requirement 10: "The undertaking shall disclose financial and other resources allocated to climate change mitigation and adaptation action plans".**

BC310. Undertakings disclosing climate change mitigation and adaptation related resources shall follow consistent rules to become more comparable and more credible. General information on resources will be provided in the Basis for Conclusions of ESRS 5.

BC311. **CapEx, R&D, OpEx and FTE**: The purpose of the disclosure requirement of the resources needed to implement action plans in line with policies and targets is to demonstrate that all these policies, targets and action plans are fully embedded into the business and financial planning of the undertaking. This should foster integrated thinking and reporting. Both CapEx and OpEx related to climate policies should be disclosed and reconciliated with financial statements and taxonomy regulation disclosures (KPIs and CapEx plan). CapEx are the most obvious and easy to identify ones. R&D expenditures are also already required under financial reporting standards. When it comes to OpEx, usual reporting systems are not structured to identify the ones relating to climate policies. The identification of FTE dedicated to climate policies for instance remains a difficult question due to the fact that some people managing climate are often part-time. A precise definition of OpEx related to climate policies is still not available and the disclosure of OpEx should remain indicative.

BC312. **Consistency with the EU Taxonomy**: The disclosure of CapEx and OpEx should be coherent with those presented under the Taxonomy Article 8 disclosures for consistency reasons. When it comes to the CapEx plan, the one requested under Article 8 of the Taxonomy Regulation may well fit the purpose. But the disclosure of CapEx and OpEx should not be limited or restricted to the Taxonomy Article 8 disclosures, as the CapEx and OpEx associated with activities non-eligible to the Taxonomy might also be relevant to the action plans for climate mitigation and adaptation. Accordingly, climate-related CapEx and OpEx may be higher than the ones disclosed under the Taxonomy regulation but not lower.

BC313. **EU legislation and global reporting frameworks**: This disclosure is compatible with TCFD, IFRS, CDP. TCFD and IFRS use the term of "financial planning" rather than "resources". TCFD final report recommendations ask for the description of "how climate-related issues serve as an input to their financial planning process". Moreover, TCFD guidance on metrics, targets and transition plans asks for the metric of "capital deployment", which is the amount of capital expenditure, financing, or investment deployed toward climate-related risks and opportunities. IFRS climate prototype asks "how significant climate-related risks and opportunities are included in the entity's financial planning decision making (for example, in relation to investment decisions and funding)". CDP requires companies to disclose whether, where and how climate-related risks and opportunities have influenced financial planning.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility

WORKING PAPER

Resources allocated to climate change mitigation and adaptation action plans			TCFD, Final Report Recommendations (2017), Strategy - Recommended disclosure (b) TCFD, Guidance on metrics, targets, and transition plans (2021), Cross-industry, climate-related metric categories IFRS, Climate-related Disclosure Prototype (2021), Disclosure 8 (d) and 9 (b&c) CDP, Questionnaire (2021), C3.1 and C3.4

WORKING PAPER

Climate Performance Measurement

Energy Consumption & Mix

Background

BC314. Energy related activities represent the most significant GHG emission sources for many sectors such as industry, transport and construction/real estate activities. In particular, the combustion of fossil fuels such as coal, oil and gas emits carbon dioxide gas into the atmosphere. Globally, energy use accounts for around three-quarters of GHG emissions and two thirds of the growth of GHG emissions[85]. In the European Union, the energy sector contributes over 75% of total GHG emissions[86].

BC315. In this context, companies have two main levers for action to combat climate change and lower their environmental footprint throughout the generation, transmission, distribution and end-use of energy. On the one hand, they must decarbonise their energy mix by getting rid of fossil fuel sources and opting for renewable and low-carbon energy sources. On the other hand, they must save energy by reducing energy consumption and using energy more efficiently.

BC316. The IPCC's Special Report on Global Warming of 1,5°C[87] points out that the share of primary energy from renewables increases while coal usage decreases across pathways limiting warming to 1.5°C. From 2020 to 2050 the primary energy supplied by oil should decline by -39% to -77%, and natural gas must change by −13% to −62% according to most 1,5°C pathways By 2050, renewables should supply a share of 52–67% of primary energy, while the share from coal should decrease to 1–7%, with a large fraction of this coal use combined with carbon capture and storage.

BC317. The IPCC's Special Report on Global Warming of 1,5°C also specifies that demand-side measures are key elements of 1.5°C pathways. Lifestyle choices lowering energy demand can further support achievement of 1.5°C pathways. By 2030 and 2050, all end-use sectors (including building, transport, and industry) should show marked energy demand reductions in modelled 1.5°C pathways.

BC318. The Special Report also states that 1.5°C pathways include a rapid decline in the carbon intensity of electricity, as well as energy-demand reductions through efficiency improvements and demand-reduction measures. Therefore, energy efficiency coupled with energy sobriety is generally considered in policy as the primary measures to reduce energy demand through technological options such as insulating buildings, more efficient appliances, efficient lighting, efficient vehicles, etc.

BC319. The European Commission's proposal for a new Energy Efficiency Directive[88] outlines that "while the energy savings potential remains large in all sectors, there is a specific challenge related to transport, as it is responsible for 30% of final energy consumption, and to buildings, since 75% of the Union building stock has a poor energy performance". "Another important sector to which increasing attention is being paid is the information and communications technology (ICT) sector, which is responsible for 5-9% of the world's total electricity use and more than 2% of all emissions".

WORKING PAPER

[85] IEA, "Net Zero by 2050 a Roadmap for the Global Energy Sector", 2021. Available here. IAE, "Global Energy and CO_2 Status Report", 2019). Available here.

[86] Proposal for a Directive COM/2021/557 of the European Parliament and of the Council amending the Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652. Available here.

[87] IPCC, "Special Report on Global Warming of 1.5 °C", 2018. Available here.

[88] Proposal or a Directive COM/2021/558 of the European Parliament and of the Council on Energy Efficiency. Available here.

EU legislation and recommendations

BC320. The draft CSRD[89] states that "achieving a climate neutral economy (…) requires the full mobilisation of all economic sectors", in particular "reducing energy use and increasing energy efficiency is key in this respect as energy is used across supply chains". Therefore, CSRD concludes that "energy aspects should be duly considered in sustainability reporting standards, in particular in relation to environmental matters".

BC321. The European Green Deal[90] establishes the objective of the EU becoming climate neutral in 2050. That objective, and the objective of a 55% reduction in GHG emissions by 2030 as set out in the 2030 Climate Target Plan[91] that was endorsed both by the European Parliament and by the European Council, requires an energy transition and significantly higher shares of renewable energy sources in an integrated energy system.

BC322. Reducing energy intensity and carbon intensity is primary to achieve the European Green Deal objectives of resource-efficient economy and net zero emissions by 2050. Efficient use of energy allows ensuring cost-effective delivery of the EU's current and future climate ambition.

BC323. Existing EU legislation and guidelines already mandate undertakings to disclose metrics related to energy consumption and mix (European Commission's Guidelines on reporting climate-related information[92], SFDR[93], EMAS Regulation[94]) or require the efficient use of energy (e.g. Article 8 of the Energy Efficiency Directive[95] regarding energy audits or Article 11 of the Industrial Emission Directive[96] (2010/75/EU) regarding general obligations of operators).

BC324. The associated draft RTS requires financial market participants to disclose the share of non-renewable energy consumption and non-renewable energy production of investee companies, as well as the breakdown of energy consumption by type of non-renewable sources of energy.

BC325. The SFDR RTS also requires financial market participants to disclose "Energy consumption intensity per high impact climate sector", meaning the ratio of energy consumption per unit of activity, output or any other metric of the investee company to the total energy consumption of that investee company.

BC326. The Taxonomy Regulation[97] emphasises the primary role of energy consumption in reducing GHG emissions. Energy or electricity consumption as such is also referred to in the Taxonomy Climate Delegated Act, e.g. in the technical screening criteria for manufacture of aluminium or for water supply and waste treatment.

WORKING PAPER

[89] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

[90] Communication from the Commission the European Green Deal (C/2019/640). Available here.

[91] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Stepping up Europe's 2030 climate ambition Investing in a climate-neutral future for the benefit of our people (COM/2020/562). Available here.

[92] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

[93] Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector. Available here.

[94] The Revised Annexes of the EMAS Regulation, 2018. Available here.

[95] Proposal or a Directive COM/2021/558 of the European Parliament and of the Council on Energy Efficiency. Available here.

[96] Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control). Available here.

[97] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Taxonomy Regulation). Available here.

BC327. The European Commission's proposal for a new Renewable Energy Directive[98] in the 'Fit-for-55' Package[99] sets (i) an increased EU target to produce 40% of energy from renewable sources by 2030; (ii) sub-targets for renewable hydrogen and hydrogen-based synthetic fuels in transport (2.6%) and in industry (50% share in hydrogen consumption); and (iii) an indicative target of 49% renewable share in the energy used in buildings.

BC328. In order to monitor these commitments, the European Commission's proposal for a new Energy Efficiency Directive[100] requires sector-specific metrics to measure energy consumption and/or production, and more specifically the share of energy from renewable sources. Article 15a of the proposed new directive states that "member states shall set an indicative target for the share of renewables in final energy consumption in their buildings sector in 2030 that is consistent with an indicative target of at least a 49 % share of energy from renewable sources in the buildings sector in the Union's final consumption of energy in 2030". Article 22a of the proposed new directive states that "member states shall endeavour to increase the share of renewable sources in the amount of energy sources used for final energy and non-energy purposes in the industry sector by an indicative average minimum annual increase of 1.1% by 2030".

BC329. The proposed new directive furthermore establishes that "enterprises with an average annual consumption higher than 100TJ of energy over the previous three years and taking all energy carriers together, implement an energy management system." If those enterprises do not implement an energy management system, they are subject to an energy audit and the results of the energy audit and the implemented recommendations shall be published in the enterprise's annual report.

BC330. The European Commission's proposal for a new Energy Efficiency Directive in the 'Fit-for-55' Package also sets a higher binding annual target for reducing energy use at EU level, requiring member states to collectively ensure that energy consumption is reduced by at least 9% by 2030 compared to 2020. It nearly doubles the annual energy savings obligation of each Member State, to at least 1.5% each year from 2024 to 2030. The public sector will notably be required to renovate 3% of its buildings each year. The proposal promotes 'energy efficiency first' as an overall principle of EU energy policy and marks its importance and relevance in both its practical applications in policy and investment decisions.

BC331. Moreover, the revised Energy Efficiency Directive establishes that where member states decide to fulfil their obligations to achieve the amount of savings required by the directive by way of an energy efficiency obligation scheme, they shall ensure that obligated parties (among transmission system operators, energy distributors, retail energy sales companies and transport fuel distributors or transport fuel retailers operating in each Member State's territory) achieve their cumulative end-use energy savings requirement within a pre-defined calendar. It also requires that "member states shall ensure where a district heating and cooling system is built or substantially refurbished it meets a set of criteria in terms of energy efficiency".

Global reporting frameworks

BC332. The international frameworks generally require detailed reporting of energy consumption and mix. CDP[101], GRI[102] and SASB[103] provide clear methodologies to calculate the energy consumption within the organisation.

WORKING PAPER

[98] Proposal for a Directive COM/2021/557 of the European Parliament and of the Council amending the Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652. Available here.

[99] Communication from the Commission 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality (C/2021/550). Available here.

[100] Proposal or a Directive COM/2021/558 of the European Parliament and of the Council on Energy Efficiency. Available here.

[101] CDP, "Climate Change Questionnaire", 2021. Available here.

[102] GRI 302: Energy (2016). Available here.

[103] SASB Standards. Available here.

BC333. GRI proposes companies to disclose the energy consumption outside the organisation, the energy intensity and the energy requirements of products. This implies that companies should consider their complete value chain including the end use and is based on the logic that companies may have a significant impact on the global energy consumption and carbon emissions through their products. However, the provided guideline remains vague as it is up to the undertaking to define its methodology. The case for reporting on energy intensity or consumption by products will be detailed in the “Energy Intensity and Carbon Intensity” section of this document.

BC334. Additionally, CDP proposes the publication of fuels consumption as feedstocks.

BC335. Energy intensity is required by reference reporting frameworks. GRI requires organisations to disclose “energy intensity” [104] based on company specific metrics. CDP[105] requires the publication of “energy-related activities” detailing the calculation of some sectors such as cement, chemical production and metals and mining.

Users’ needs

BC336. Based on the above, the disclosure of an undertakings energy consumption and mix supports EU climate and energy policy goals and existing regulations.

BC337. Decarbonising industrial processes and saving energy allow undertakings to enhance their competitiveness in terms of cost reductions, limit their environmental liabilities, and grant better preparation for future environmental regulations, thereby decreasing the transition risk exposure of these organisations.

BC338. Moreover, the disclosure of energy consumption and mix in absolute value and in intensity ratios are key performance indicators that allow providers of financial capital to assess the level of financial risk stemming from energy consumption linked to GHG emissions. It is observed that energy-based metrics are required by the SFDR but also by European Supervisory Authorities (‘ESAs’) in their supervisory rulebooks for financial institutions to assess climate-related risks that could affect financial stability.

BC339. More specifically, the usefulness of intensity indicators is to allow investors and other stakeholders to compare companies from one year to another, eliminating perimeter effects (potential acquisitions/divestments in assets for instance that could increase/reduce absolute GHG emissions).

Conclusions

BC340. Energy accounts for a significant share of worldwide GHG emissions. In addition to its significant contribution to climate change, it is commonly agreed that human production and use of energy have further impacts on the environment. Therefore, the undertaking should create transparency on its energy consumption and mix.

BC341. While recognising that the disclosure of energy intensity per revenue is not the most relevant indicator for non-financial sectors, it has been taken into account as this disclosure is required for financial market participants in accordance with the SFDR as it favours the comparability between sectors.

BC342. The disclosure of energy consumption and mix is directly part of GHG emissions Scope 1 and Scope 2 calculations with no sectorial distinction according to the GHG Protocol Corporate Standard and ISO 14064-1, which have become internationally accepted standards.

Consequently, the reporting of energy consumption is necessary to guarantee the accuracy of emissions accounting. Moreover, the breakdown of energy consumption between direct fuel combustion and indirect energy consumption is particularly relevant to

[104] GRI 302: Energy (2016). Available here.

[105] CDP, “Climate Change Questionnaire”, 2021. Available here.

WORKING PAPER

better understand the dynamic relationship between energy consumption and GHG emissions reduction at the undertaking level.

Choice of specific disclosures

Energy consumption & mix

BC343. **The [draft] standard includes the following Disclosure Requirement 11: "The undertaking shall provide information on its energy consumption".**

BC344. The breakdowns by non-renewable and renewable sources allow to understand the dependence of the undertaking on different types of fossil fuels, each being associated with GHG emissions and other environmental and social impacts. Over time, the disclosure allows to track efforts for decarbonising the undertaking's energy mix and extent of deployment of renewable energy.

BC345. **Primary vs. final energy**: It is recommended that all quantitative energy-related information should be reported in terms of final energy consumption, as final energy is easier to collect for preparers and such reporting appears to be the market practice.

BC346. **EU legislation and global reporting frameworks**: This disclosure relies on the SFDR-RTS and European Commission's Guidelines on reporting climate-related information. It answers the SFDR-RTS requirement on the share of non-renewable energy consumption compared with renewable. The Commission Guidelines on non-financial reporting recommend considering the KPI of "total energy consumption and/or production from renewable and non-renewable source". GRI 302-1 requires the disclosure of energy consumption within the organization, including total fuel consumption from non-renewable sources and renewable sources. The proposal of GRI 302-2 to disclose the energy consumption outside the organisation is not included in the proposal. CDP asks the reporting of the organization's energy consumption totals and by fuel types, as well as details on the electricity, heat, steam and cooling generated and consumed.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Energy consumption & mix		SFDR, Climate and other environmental-related indicators 5. Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.5	GRI 302-1 CDP, Questionnaire (2021), C8.2

WORKING PAPER

Energy intensity

BC347. **The [draft] standard includes the following Disclosure Requirement 12: "The undertaking shall provide information on the energy consumption associated with activities in high climate impact sectors per net turnover".**

BC348. **EU legislation and global reporting frameworks**: This disclosure relies on the SFDR-RTS and European Commission's Guidelines on reporting climate-related information. This disclosure answers the requirement on the energy consumption per revenue of

investee companies, per high impact climate sector from RTS on ESG disclosure under the SFDR.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Energy intensity		SFDR, Climate and other environmental-related indicators 6.	GRI 302-3

Disclosure Requirements to be considered in future sets of standards

BC349. The disclosure of energy intensity ratios per revenue certainly fosters comparability, but is, however, not the most relevant and reliable indicator for non-financial sectors for the below reasons:

(a) it may be less environmentally robust due to the volatility of economic metrics and method reliance on idealised conditions.

(b) it may not be correlated with emissions tied to physical production processes, especially for sectors with high price fluctuations.

(c) target progress can be difficult to track if undertakings experience financial losses in certain years.

BC350. Therefore, undertakings that pursue activities in high climate impact sectors should disclose their energy intensity per activity (MWh/unit of production) because denominators relying on sectoral production units increase the quality and relevance of information. However, since these denominators are only comparable for companies in the same sector, the disclosure is particularly relevant for companies belonging to high climate impact sectors and hence should be considered for sector-specific standards.

BC351. Numerators of intensity ratios should be calculated on the same scope (in terms of activities covered) as the denominators for consistency reasons. This means that the absolute values of the “Energy Consumption” sub-topic should be considered as the source of the data but may have to be split by activity (if several) in order to match with production units per activity. Energy intensity should therefore be disclosed broken down by activity or operating segments /business unit and the denominator should be adapted to use an activity-specific metric.

BC352. Information on energy intensity of buildings (MWh/m^2) was considered to be aligned with EU green buildings objectives and to support the proposal for recasting the EU Energy Efficiency Directive. Since all undertakings are occupying offices, the disclosure is relevant for all undertakings whatever the sector. The disclosure is postponed to a later set as it must be segmented by building types (offices, hotels, shopping centres, etc.) according to sector specific standards.

BC353. Undertakings that pursue activities in the sectors for which the use of hydrogen is relevant may disclose the share of green hydrogen in the total energy consumption (%). The disclosure aims to support EU sub-targets for renewable hydrogen and hydrogen-based synthetic fuels in transport (2.6%) and in industry (50% share in hydrogen consumption) from the proposal for a revised Renewable Energy Directive in the “Fit for 55” Package. It should be closely aligned with the related EU legislation still underway.

WORKING PAPER

Greenhouse Gases Emissions

Background

BC354. The IPCC's Sixth Assessment Report on Climate Change[106] confirms that human activities are at the root cause for global climate change. Greenhouse gases emissions have been increasing since the first industrial era and the consequences for humans and their environment are already and will be particularly severe. According to the IPCC report, human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years. In 2019, atmospheric carbon dioxide (CO_2) concentrations were higher than at any time in at least 2 million years, and concentrations of methane (CH_4) and nitrous oxide (N_2O) were higher than at any time in at least 800,000 years. Since 1750, increases in CO_2 (47%) and CH_4 (156%) concentrations far exceed, and increases in N_2O (23%) are similar to, the natural multi-millennial changes between glacial and interglacial periods over at least the past 800,000 years. Human-induced climate change is already affecting many regions across the globe, e.g. by heatwaves, heavy precipitation, droughts, increasing amount and intensity of tropical cyclones or rising sea levels.

BC355. As reminded by the IPCC's 2018 Special Report on Global Warming of 1,5°C[107], human activities, notably in the sectors of industry, buildings, transport, energy and agriculture, represent the main sources of GHG emissions. They increase the CO_2 concentration in the atmosphere, causing an additional greenhouse effect and generating a radiative forcing. This results in an imbalance between carbon sources and sinks, which disturbs the distribution of the energy budget on the earth. The accumulated energy leads to the warming of the ocean (93% of energy budget), the melting of the ice (3%), the dissipation into the ground (3%), and the warming of the atmosphere (1%).

BC356. In this context, since 2015 the EU Member States are committed to the Paris Agreement which entails limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C above pre-industrial levels.[108]

BC357. The IPCC's 2018 Special Report on Global Warming of 1,5°C and 2021 Sixth Assessment Report on Climate Change insist on the clear benefits to people and natural ecosystems of limiting global warming to 1,5°C compared to 2°C. On the one hand, climate change has environmental consequences, including but not limited to the increase in water and soil temperatures, the sea level rise, the melting of glaciers and ice caps, the changes in ocean currents, the disruption of the water cycle (floods, droughts, submersions, cyclones), extreme events (heat peaks, fires), the increase in the ozone hole, the decline in marine and land biodiversity, and the decrease in freshwater resources. On the other hand, climate change raises social issues, including but not limited to the impacts on human health (displacement of endemic areas for diseases, increase in microbial diversity, rising heat-related mortality, etc.), the decrease in agricultural yields, the multiplication of famines, the increase of climate refugees and geopolitical risks.

As consequences from climate change become more frequent and prominent, governments are expected to increase efforts in climate change mitigation and adaptation. New policies and additional market-based incentives can drive significant reductions in GHG emissions and can direct economic growth onto a low-carbon trajectory. This can create substantive opportunities for undertakings but also poses risks to companies, if they are unable to adjust their business models.

WORKING PAPER

[106] IPCC, "Sixth Assessment Report on Climate Change", 2021. Available here.

[107] IPCC, "Special Report on Global Warming of 1.5 °C", 2018. Available here.

[108] EU's ratification of the Paris Agreement, 2016. Available here.

EU legislation and recommendations

BC358. The draft CSRD[109] states in recital 41 that with regard to climate-related information, users are "interested in the level and scope of GHG emissions and removals[110] attributed to the undertaking, including the extent to which the undertaking uses offsets[111] and the source of those offsets". It stresses that "achieving a climate neutral economy requires the alignment of GHG accounting and offset standards" and that "users need reliable information regarding offsets that addresses concerns regarding possible double-counting and overestimations, given the risks to the achievement of climate-related targets that double-counting and overestimations can create". It concludes that "the reporting standards should therefore specify the information undertakings should report with regard to those matters".

BC359. The EU launched in 2019 the European Green Deal[112] with the aim to tackle current climate and environmental challenges. As one of the key elements of the European Green Deal, the European Climate Law[113] enshrines the EU's commitment to reaching climate neutrality by 2050 and the intermediate target of reducing net GHG emissions by at least 55% by 2030, compared to 1990. By 2050, the EU's GHG emissions must be net zero[114] and economic growth decoupled from resource use. Thus, the transition requires active participation from businesses to bring down GHG emissions. Consequently, the comprehensive measuring of and reporting on undertakings' GHG emissions is central to verifying that the EU is on the trajectory towards net zero emissions by 2050.

BC360. In July 2021, the European Commission published the "Fit-for-55" package[115]. It consists of a chapeau Communication and 15 interconnected legislative proposals, aiming to deliver the European Green Deal and set the EU's climate and energy framework on course to meet the new target of reducing GHG emissions by at least 55% by 2030 compared to 1990 levels. It notably includes: a review of the EU ETS, a proposal for establishing a Carbon Border Adjustment Mechanism (CBAM) and several other initiatives, including an update of the Energy Taxation Directive; a new social climate fund to protect vulnerable households; stricter emissions standards for cars (proposing to end the sale of petrol and diesel cars and vans from 2035); new energy efficiency standards for buildings; new targets for renewable energy and land use and forestry, and new requirements for the aviation and maritime shipping sectors.

BC361. The SFDR[116] requires financial market participants to disclose GHG emissions from investee companies broken down in Scope 1, Scope 2 and Scope 3. In order to fulfil this

WORKING PAPER

[109] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

[110] According to the glossary of the IPCC, removals refer to the withdrawal of GHGs from the atmosphere as a result of deliberate human activities. These include enhancing biological sinks of CO_2 and using chemical engineering to achieve long-term removal and storage. Carbon capture and storage (CCS) from industrial and energy-related sources, which alone does not remove CO_2 in the atmosphere, can reduce atmospheric CO_2 if it is combined with bioenergy production (BECCS). See also Anthropogenic emissions, Bioenergy with carbon dioxide capture and storage (BECCS) and Carbon dioxide capture and storage (CCS).

[111] The GHG protocol define offset as a discrete GHG reductions used to compensate for (i.e., offset) GHG emissions elsewhere, for example to meet a voluntary or mandatory GHG target or cap. Offsets are calculated relative to a baseline that represents a hypothetical scenario for what emissions would have been in the absence of the mitigation project that generates the offsets. To avoid double counting, the reduction giving rise to the offset must occur at sources or sinks not included in the target or cap for which it is used.

[112] Communication from the Commission the European Green Deal (C/2019/640). Available here.

[113] Amended Proposal for a Regulation COM/2021/563 of the European Parliament and of the Council on establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law). Available here.

[114] According to the glossary of the IPCC, net zero CO_2 emissions are achieved when anthropogenic CO_2 emissions are balanced globally by anthropogenic CO_2 removals over a specified period. Net zero CO_2 emissions are also referred to as carbon neutrality.

[115] Communication from the Commission 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality (C/2021/550). Available here.

[116] Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector. Available here.

reporting requirement, financial market participants need ready-to-use information of the direct and indirect GHG emissions of their investee companies.

BC362. The SFDR also requires financial market participants to disclose "GHG intensity" of investee companies calculated in accordance with the following formula.

$$\sum\left(\frac{\text{current value of investment}_i}{\text{current value of all investments (€M)}} \times \frac{\text{investee company's Scope 1,2 and 3 GHG emissions}_i}{\text{investee company's €M revenue}_i}\right)$$

BC363. The European Commission's Guidelines on reporting climate-related information[117] recommend that entities in the scope of the NFRD[118] calculate and report direct and indirect GHG emissions according to the three scopes of the GHG Protocol (Scope 1, Scope 2 and Scope 3).

BC364. According to the European Commission's Guidelines on reporting climate-related information, Scope 3 should account for emissions from activities that occur "downstream" and "upstream" from the company's own operations. Companies should not exclude any activity that would compromise the relevance of the reported Scope 3 GHG emissions inventory.

BC365. The European Central Bank ('ECB')[119] states that financial institutions are expected to disclose climate-related risks that are financially material in line with the European Commission's Guidelines on reporting climate-related information. In particular, institutions are expected to disclose their Scope 1, 2 and 3 GHG emissions.

BC366. GHG emissions reporting is also required by the EU Emission Trading Scheme ('ETS')[120] and the EU EMAS Regulation[121]. More specifically, the EU ETS in phase IV covers CO_2 emissions (fairly equivalent to Scope 1 emissions in the GHG protocol), N20 emissions from all nitric, adipic and glyoxylic acid production, PFC emissions from aluminium production. Annex IV of the EMAS regulation[122] requires organisations that take part in the voluntary scheme to report on their "total annual emission of greenhouse gases", including at least emissions of CO_2, CH_4, N_2O, HFCs, PFCs, NF_3 and SF_6, expressed in tonnes of CO_2 equivalent" in absolute and intensity terms, according to an established methodology, such as the GHG Protocol.

Global reporting frameworks

BC367. The GHG Protocol and ISO 16064-1 have guided the current accounting and reporting practice on GHG emissions.

BC368. The GHG Protocol Corporate Standard[123] defines three scopes of GHG emissions and provides methodological guidelines for their compilation and calculation. Scope 1 contains the direct GHG emissions occurring from sources that are owned or controlled by the undertaking. Scope 2 contains indirect GHG emissions from the purchase of electricity, steam, and heating/cooling. Scope 3 contains other indirect GHG emissions occurring in the value chains of an undertaking. The GHG Protocol defines 15 categories to which a company's indirect Scope 3 GHG emissions can relate. The GHG Protocol Corporate Standard is supplemented by the GHG Protocol Corporate Value Chain (Scope 3)

WORKING PAPER

[117] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

[118] Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups. Available here.

[119] ECB, "Guide on climate-related and environmental risks", 2020). Available here.

[120] European Commission, "EU Emissions Trading System (EU ETS)". Available here.

[121] The Revised Annexes of the EMAS Regulation, 2018. Available here.

[122] Commission Regulation (EU) 2018/2026 of 19 December 2018 amending Annex IV to Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS). Available here.

[123] GHG Protocol "Corporate Standard", 2004. Available here.

Standard[124], that includes further requirements and guidance on how to prepare and report on Scope GHG emissions.

BC369. ISO 14064-1[125] is an international standard for quantification and reporting of GHG emissions at an organisation's level. Like the GHG Protocol, ISO 14064-1 distinguishes between direct and indirect emissions but does not define scopes. While Scope 1 emissions in the GHG Protocol correspond to the direct emissions of ISO 14064-1, ISO 14064-1 summarises Scopes 2 and 3 as indirect emissions. Despite some discrepancies in the two methodologies, the standards are considered to be fairly harmonised.

BC370. GRI 305[126] requires the disclosure of direct GHG emissions (Scope 1), energy indirect GHG emissions (Scope 2) location based and if applicable market-based, other indirect GHG emissions (Scope 3) by categories and GHG reductions broken down by business unit, by country, by type of source or activity. It also requires "GHG emissions intensity". GRI 305 provides detailed compiling and calculation methods requirements.

BC371. The CDP, in its climate change questionnaire[127], requires in sections C5, C6 and C7 comprehensive data on Scope 1, 2 and 3 emissions and associated calculation methodologies and breakdowns. It also requires the publication of "emissions intensity" detailing the calculation of some sectors such as cement, chemical production and metals and mining.

BC372. The climate-related disclosures prototype developed by the TRWG of the IFRS[128] introduces the following cross-industry metric related to GHG emissions, without detailing the calculation methods:

(a) "greenhouse gas emissions – in terms of absolute gross Scope 1, Scope 2 and Scope 3, expressed as metric tonnes of CO2 equivalent, in accordance with the Greenhouse Gas Protocol, and emissions intensity".

BC373. The TCFD recommends the disclosure of Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions since these are the main driver for an undertaking's transition risks. The TCFD's "Guidance on Metrics, Targets, and Transition Plans"[129] states in addition that "disclosure of GHG emissions is crucial for users to understand an organization's exposure to climate-related risks and opportunities and is also foundational information from which other climate-related information is estimated. Disclosure of absolute GHG emissions across an organization's value chain provides insight into how a given organization may be affected by policy, regulatory, market, and technology responses to limit climate change, while associated GHG emissions intensity information can provide a useful comparison across organizations".

BC374. TCFD "strongly encourages all organizations to disclose Scope 3 GHG emission". TCFD further argues that "there has been significant work to advance the understanding and calculation of GHG emissions for financial organizations, allowing financial preparers to disclose their own Scope 3 GHG emissions in a more comparable and complete manner". TCFD "recognizes several challenges associated with disclosure of Scope 3 GHG emissions, including data availability, calculation methodologies, scoping, and organizational barriers". TCFD mentions a 2017 study by CDP, which found that of the three GHG emissions scopes, "approximately 40% of global GHG emissions are driven or influenced by organizations through their purchases (i.e., purchased goods and services) and through the products they sell" (in other words, through their Scope 3 GHG emissions)". The 40 % threshold is also referred to by the SBTi[130] that states "if Scope 3 emissions compose over 40% of total Scope 1, 2, and 3 emissions, companies shall

WORKING PAPER

[124] GHG Protocol "Corporate Value Chain (Scope 3) Accounting and Reporting Standard", 2011. Available here.

[125] ISO 14064-1:2018 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals. Available here.

[126] GRI 305: Emissions, 2016. Available here.

[127] CDP, "Climate Change Questionnaire", 2021. Available here.

[128] TRWG of the IFRS, "Climate-related disclosures prototype", November 2021. Available here.

[129] TCFD, "Guidance on Metrics, Targets, and Transition Plans", October 2021. Available here.

[130] SBTi, "Corporate Manual", 2021. Available here.

develop ambitious Scope 3 targets that collectively cover at least two-thirds Scope 3 emissions".

BC375. SASB Standards[131] pursues a sector-specific approach. Reporting of GHG emissions is a general issue category in the SASB standards but only relates to Scope 1 emissions in carbon intensive sectors.[132]

Users' needs

BC376. Accounting and disclosing quantitative information on GHG emissions fulfils the purpose of informing investors and other stakeholders on how an undertaking is progressing towards reducing its GHG emissions in line with its climate targets. This is an essential information for external stakeholders and the undertaking itself to monitor – on an ongoing basis – whether the undertaking is on a trajectory towards net zero and, as such, whether it supports the respective EU policy goals. Transparency on direct and indirect GHG emissions is also an important prerequisite for the assessment of an undertaking's transition risks.

BC377. Furthermore, investors and other stakeholders that rely on the ability of the undertaking to create value must be able to obtain a comprehensive understanding of the extent to which GHG emissions throughout an undertaking's value chain affect its risk profile. Because investors make decisions based – among other things – on the risks to which the undertakings are subject to, this will lead to better investments decisions. In addition, including the whole value chain will allow other stakeholders and the undertaking itself to obtain the full picture of its carbon footprint, as the majority of GHG emissions often occur in indirectly from activities in the value chain.

BC378. The proposed Regulatory Technical Standard under the SFDR will require financial market participants to disclose the Scope 1, 2 and 3 GHG emissions of their investee companies as well as GHG intensity per revenue. It is therefore necessary that undertakings pursuant to the CSRD report that information through the ESRS.

BC379. Undertakings also increasingly report on their efforts to remove CO_2 from the atmosphere, their activities in financing GHG mitigation projects outside their value chain ("offsets") or avoided GHG emissions from their products and services. Users appear to be interested in such information being provided with the necessary transparency on accounting methodologies, assumptions and quality criteria applied to avoid unsubstantiated claims and greenwashing.

Conclusions

BC380. Measuring and reporting GHG emissions from own operations (Scope 1), externally purchased energy (Scope 2) and the value chain (Scope 3) is a central element of the ESRS on climate change mitigation from an impact and financial materiality perspective and concludes these emissions should be reported by all undertakings.

BC381. Reporting on Scope 1 and 2 GHG emissions is a well-established practice and methodological standards, on which preparers can rely, are readily available.

BC382. Accounting and reporting on Scope 3 GHG emissions involves difficulties for preparers because the related GHG emission sources are not under the direct control of the undertaking. However, the analysis of the TCFD that progress in Scope 3 data and methodologies has been made over the last years and stresses in that information on GHG emissions in the value chain often account for the bulk of an undertaking's carbon footprint and can entail risks for the undertaking's own operations, products and services. For proportionality, reporting on Scope 3 should be limited to the significant Scope 3 categories, determined at the entity level.

WORKING PAPER

[131] SASB Standards. Available here.

[132] SASB Materiality Map. Available here.

BC383. As a consequence, it is recommended that undertakings from all sectors shall disclose Scope 1, Scope 2 and Scope 3 GHG emissions.

BC384. Furthermore, it is recommended that the disclosure of GHG intensity per revenue shall apply to all companies as it allows to meet the information needs of financial market participants according to the SFDR while taking into account companies have better knowledge of their revenue details than financial market participants.

BC385. By including GHG emissions stemming from undertakings' value chains, there will be a "double counting" of emissions, as one undertaking's indirect emissions from purchased energy and in the value chain relate to other entity's emissions from operations. However the inherent double counting in the reporting of Scope 2 and 3 emissions does not impair the quality and understandability of a disclosure on GHG-emissions. Contrary, reporting on Scope 2 and disclosing Scope 3 is considered as an added value for stakeholders to understand the carbon footprint of an organisation and its dependencies on fossil fuels.

BC386. An undertaking's management and reporting efforts should focus on reducing GHG emissions from its own operations and the value chain but acknowledges the need to ensure the provision of substantiated information on GHG removals, offsets and avoided GHG emissions, should it be reported by an undertaking. Consequently, Optional Disclosure Requirements 17, 18 and 19 should cater for this need. If an undertaking deems it material to disclose information on GHG removals, offsets or avoided strategies, it shall adhere to the provisions of these optional Disclosure Requirements.

Choice of specific disclosures

GHG emissions Scope 1

BC387. **The [draft] standard includes the following Disclosure Requirement 13: "The undertaking shall disclose its gross Scope 1 GHG emissions in metric tons of CO_2 equivalent".**

BC388. **Scope 1 GHG emissions:** Undertakings shall disclose Scope 1 GHG emissions in absolute value over comparative year(s) and in relation to a base year to allow investors and other stakeholders to undertake evolution analysis and monitoring the performance. The option to add short-lived climate forcers that are usually not accounted for in the reporting on GHG emissions, like black carbon and tropospheric ozone, is being discussed and could be covered in the sectoral standard.

BC389. **Share under regulated emission trading schemes**: In addition to the total Scope 1 GHG emissions, undertakings shall report separately direct GHG emissions under the regulated emission trading schemes, including the EU ETS and national schemes. This will allow to calculate the potential financial effects related to emission trading in the future as part of an undertaking's transition risk (see the "Financial Exposure to Transition" subtopic in the "Performance Measurement" section) and ensure consistency with existing reporting requirements under the EU ETS.

BC390. **EU legislation and global reporting frameworks**: This disclosure relies on the SFDR-RTS and European Commission's Guidelines on reporting climate-related information. The disclosure of Scope 1 GHG emissions is compatible with TCFD, IFRS, GRI, CDP. It answers the requirement on the Scope 1 GHG emissions from the SFDR-RTS. The Commission Guidelines on non-financial reporting recommend considering the KPI of "GHG emissions from sources owned or controlled by the company (Scope 1)". Both TCFD proposed guidance on metrics, targets and transition plans and IFRS climate prototype ask for the metric of "GHG emissions", including absolute Scope 1. 305-1 requires the disclosure of direct (Scope 1) GHG emissions. CDP asks the reporting of gross global Scope 1 emissions.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility

WORKING PAPER

GHG emissions Scope 1		SFDR, Climate and other environmental-related indicators 1. Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.5	TCFD, Guidance on metrics, targets, and transition plans (2021), Cross-industry, climate-related metric categories IFRS, Climate-related Disclosure Prototype (2021), Disclosure 13 (a) GRI 305-1 CDP, Questionnaire (2021), C6.1, C5.1 and 2

<u>GHG emissions Scope 2</u>

BC391. **The [draft] standard includes the following Disclosure Requirement 14: "The undertaking shall disclose its indirect energy Scope 2 GHG emissions in metric tons of CO_2 equivalent".**

BC392. **Location-based and market-based approaches**: indirect GHG emissions from purchased energy (Scope 2) shall be reported in location-based (grid emissions factors) and market-based (energy suppliers-specific data) values. GHG Protocol Corporate Standard and Scope 2 Guidance and GRI 305 ask to report Scope 2 GHG emissions based on both methods. Moreover, both approaches have inherent advantages and drawbacks and a choice by the preparer in favour of one or the other could undermine comparability. Location-based method reflects the average emission intensity of the grids from which the electricity is taken. Market-based method reflects the emissions from electricity that companies have chosen (or not) on the market. Contractual instruments used include energy Attribute Certificates (RECs, GOs, I-RECs, …), direct contracts, supplier specific emission factor, and emission factors representing energy and emissions not tracked or unclaimed (residual mix).

BC393. **EU legislation and global reporting frameworks**: This disclosure relies on the SFDR-RTS and European Commission's Guidelines on reporting climate-related information. It is compatible with TCFD, IFRS, GRI, CDP. This disclosure answers the requirement on the Scope 2 GHG emissions from the SFDR-RTS. The Commission Guidelines on non-financial reporting recommend considering the KPI of "indirect GHG emissions from the generation of acquired and consumed electricity, steam, heat, or cooling (collectively referred to as "electricity") (Scope 2)". Both TCFD guidance on metrics, targets and transition plans and IFRS climate prototype ask for the metric of "GHG emissions", including absolute Scope 2. GRI 305-2 requires the disclosure of indirect (Scope 2) GHG emissions. CDP asks the reporting of gross global Scope 2 emissions as well as the organisation's approach to reporting Scope 2 emissions.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
GHG emissions Scope 2		SFDR, Climate and other environmental-related indicators 1. Commission, Guidelines on non-financial reporting: Supplement on	TCFD, Guidance on metrics, targets, and transition plans (2021), Cross-industry, climate-related metric categories

WORKING PAPER

		reporting climate-related information (2019), Recommended disclosures and further guidance 3.5	IFRS, Climate-related Disclosure Prototype (2021), Disclosure 13 (a) GRI 305-2 CDP, Questionnaire (2021), C6.2 and 3, C5.1 and 2

GHG emissions Scope 3

BC394. **The [draft] standard includes the following Disclosure Requirement 15: "The undertaking shall disclose its gross indirect Scope 3 GHG emissions in metric tons of CO2 equivalent".**

BC395. **Screening of Scope 3 categories**: Not all 15 categories identified in the GHG Protocol do necessarily have to be part of Scope 3 reporting. Their quantitative significance and the levers for actions on the sources of Scope 3 GHG emissions shall be taken into account. With regard to the quantitative significance of total Scope 3 emissions, TCFD refers to a 40% threshold and the SBTi[133] states that "if scope 3 emissions compose over 40% of total Scope 1, 2, and 3 emissions, companies shall develop ambitious Scope 3 targets that collectively cover at least two-thirds Scope 3 emissions". It is suggested to refrain from a fixed threshold and rather suggest to follow a criteria-based approached based on GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Version 2011, p. 63) or ISO 14064-1:2018 Annex H.3.

BC396. Bre**akdown by overarching Scope 3 categories**: From a practical point of view and for purpose of presentation, it was considered useful to reduce the amount of Scope 3 categories and proposes to summarise the 15 categories from the GHG Protocol to five overarching categories: 1) upstream purchasing, 2) downstream sold products, 3) goods transportation, 4) travels and 5) financial investments. Upstream purchasing would include the GHG protocol categories "purchased goods and services", "capital goods", "fuel- and energy-related activities (not included in scope 1 or scope 2)", "upstream leased assets" and "waste generated in operations". Downstream sold products would comprise "processing of sold products", "use of sold products", "End-of-life treatment of sold products", "Downstream leased assets", "Franchises". Goods transportation would comprise "upstream transportation and distribution" and "downstream transportation and distribution". Travels and financial investments reflect the respective GHG Protocol category. This clustering does not impair the requirement to compile the necessary information based on the 15 categories introduced by the GHG Protocol Corporate Standard.

BC397. **Update of Scope 3 inventory**: Scope 3 emissions are often estimates based on external data that are difficult to collect. For proportionality reasons, the disclosure may rely on a Scope 3 inventory that is at least fully updated every three years, or earlier in the event of substantial changes to the undertaking itself (e.g. through mergers and acquisitions) or its value chain (e.g. through the substitution of a key raw material for production).

BC398. **Role of GHG protocol standards and guidance**: standards and guidance provided by the GHG protocol is widely used by undertakings and generally accepted. Hence, it is suggested that undertakings should generally rely on the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard and related calculation guidance when compiling their Scope 3 GHG emissions for disclosure. The GHG Protocol Scope 3 Standard allows for methodological choices, such as the use of supplier specific data, averages and proxies. In this case, it is recommended to use the following merit order that aims to increase the accuracy of the data: 1) supplier specific data, 2) average of country before average of sector or product, 3) proxies based on spent. Moreover, despite GHG

[133] SBTi, "Corporate Manual", 2021. Available here.

WORKING PAPER

Protocol sectoral guidance, more sector specific definitions are needed to improve the comparability of Scope 3 disclosures.

BC399. **EU legislation and global reporting frameworks**: This disclosure relies on the SFDR-RTS and European Commission's Guidelines on reporting climate-related information. This disclosure is compatible with TCFD, IFRS, GRI, CDP. This disclosure answers the requirement on the Scope 3 GHG emissions from the SFDR-RTS. The Commission Guidelines on non-financial reporting recommend considering the KPI of All indirect GHG emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions (Scope 3)". Both TCFD guidance on metrics, targets and transition plans and IFRS climate prototype ask for the metric of "GHG emissions", including absolute Scope 3. 305-3 requires the disclosure of other indirect (Scope 3) GHG emissions. CDP asks the accounting of Scope 3 emissions.

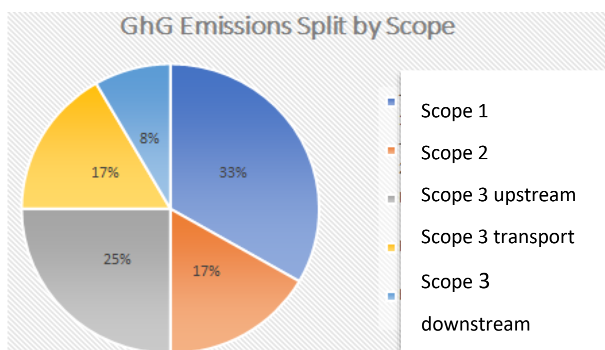
Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
GHG emissions Scope 3		SFDR, Climate and other environmental-related indicators 1. Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.5	TCFD, Guidance on metrics, targets, and transition plans (2021), Cross-industry, climate-related metric categories IFRS, Climate-related Disclosure Prototype (2021), Disclosure 13 (a) GRI 305-3 CDP, Questionnaire (2021), C6.5, C5.2

Total GHG emissions

BC400. **The [draft] standard includes the following Disclosure Requirement 16: "The undertaking shall disclose its total GHG emissions in metric tons of CO2 equivalent".**

BC401. **Breakdowns by operating segments**: The breakdown of total GHG emissions by operating segments is deemed necessary since especially larger undertakings are often pursuing different economic activities and business models which can significantly differ in their GHG emissions profile. A breakdown by operating segments is recommended, rather than by economic activities or sectors because the operating segments correspond to the undertaking's decision-making and are therefore easiest to track down in an undertaking's information system.

WORKING PAPER



BC402. **EU legislation and global reporting frameworks**: This disclosure relies on the SFDR-RTS and European Commission's Guidelines on reporting climate-related information. This disclosure is compatible with TCFD, IFRS, GRI, CDP.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Total GHG emissions		SFDR, Climate and other environmental-related indicators 1. Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.5	TCFD, Guidance on metrics, targets, and transition plans (2021), Cross-industry, climate-related metric categories IFRS, Climate-related Disclosure Prototype (2021), Disclosure 13 (a) GRI 305-1, 2 and 3 CDP, Questionnaire (2021), C6.1, 2, 3 and 5, C5.1 and 2

WORKING PAPER

GHG removals (optional)

BC403. **The [draft] standard includes the following Optional Disclosure Requirement 17: "The undertaking may disclose GHG removals from its own operations as well as in the value chain in metric tons of CO_2 equivalent".**

BC404. In addition to their GHG inventories, undertakings may provide transparency on how and to which extent they enhance natural sinks or apply technical solutions to remove GHGs from the atmosphere. This information will allow to stress efforts to remove GHGs from the atmosphere in an undertaking's own operations and its value chain. Nevertheless, generally agreed concepts and methodologies for accounting of GHG removals are still missing. Therefore, undertakings that deem it material to report on GHG removals shall be required to describe the nature of removals included in the disclosure as well as the assumptions made and the methodologies and frameworks applied to quantify such removals in order to ensure the credibility and robustness of the information disclosed.

BC405. **Accounting methodologies**: It is recommended to consider as far as applicable GHG Protocol Corporate Standard (version 2004), Product Standard (version 2011), Agriculture Guidance (version 2014), Land use, land use change, and forestry Guidance for GHG project accounting (version 2006). Current developments in accounting for GHG removals, including the European Commission's on Sustainable Carbon Cycles, the development of

a Land Sector and Removals Guidances under the auspices of the GHG protocol or the draft Forest, Land and Agriculture Science Based Target Setting Guidance by the SBTi and consequently suggest to rely consensus methods for accounting of GHG removals as soon as they are available.

BC406. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD that states in recital 41 that with regard to climate-related information, users are "interested in the level and scope of GHG emissions and removals attributed to the undertaking, including the extent to which the undertaking uses offsets and the source of those offsets".

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
GHG removals	Recital 41		

Financing GHG mitigation projects outside of the undertaking's value chain (optional)

BC407. **The [draft] standard includes the following optional Disclosure Requirement 18: "The undertaking may disclose the financing of GHG mitigation projects outside its value chain".**

BC408. Since it is not possible for most undertakings to eliminate all GHG emissions associated with their activities, products and services right away, an increasing number of undertakings uses carbon offset credits from external GHG reduction projects with the aim to balance or compensate their GHG emissions or claim "carbon neutrality". However, this trend in market practice is observed with caution as carbon offsets are limited in at least two ways. First, they are a source of greenwashing if they do not fulfill stringent quality criteria. Second, they can lead to disguising the need for GHG reductions in the undertaking's own operations and value chain and lock-in high-carbon infrastructures.

BC409. **Accounting methodology**: Offsets are no means to counterbalance or be subtracted from the amount of disclosed Scope 1, 2 or 3 GHG emissions, nor to claim progress in achieving GHG emissions reduction targets. Consequently, offsets shall be reported separately from an undertaking's GHG inventory and GHG emissions reduction targets. Ifan undertaking intends to report on offsets, it shall specify if the offsets are externally verified against the requirements of recognised national or international quality standards and shall provide details on the quality standards that the voluntary carbon offsets fulfil.[134]

BC410. **EU legislation and global reporting frameworks**: This disclosure relies on the CSRD and is compatible with IFRS and GRI. Recital 41 of the CSRD stresses that "achieving a climate neutral economy requires the alignment of GHG accounting and offset standards" And that "users need reliable information regarding offsets that addresses concerns regarding possible double-counting and overestimations, given the risks to the achievement of climate-related targets that double-counting and overestimations can create". It concludes that "the reporting standards should therefore specify the information undertakings should report with regard to those matters". IFRS climate prototype requires the reporting of "assumptions about the use of carbon offsets in achieving the target, including minimum quality or certification thresholds for the offsets" to explain how the undertaking plans to achieve any climate-related targets it has set. It also requires the disclosure of "the extent to which mitigation efforts rely on offsetting strategies and the factors affecting the choice of any offsetting strategy", including "the number of metric tonnes of offsets, the cost per metric tonne, the year in which the emission reduction occurred and the verification standard applying to the scheme". GRI 305-5 asks, in line with the provisions of the GHG protocol corporate standard, the reporting of reductions from offsets separately when the reduction of GHG emissions.

[134] The UBA Guide "Voluntary CO_2 offsetting through climate protection projects" describes quality criteria that should be fulfilled by voluntary offsets: Additionality, Permanence, robust calculation, monitoring and verification methodologies, transparency, time of issue, avoidance of double counting, involvement of stakeholders and contribution to sustainable development.

WORKING PAPER

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Financing GHG mitigation projects outside of the undertaking's value chain (offsets)	Recital 41		IFRS, Climate-related Disclosure Prototype (2021), Disclosure 8 (a) (i) and (vi) GRI 305-5

Avoided GHG emissions from products and services (optional)

BC411. **The [draft] standard includes the following optional Disclosure Requirement 19: "The undertaking may disclose its estimated total avoided GHG emissions from its products and services in metric tons of CO_2 equivalent".**

BC412. It is argued that accounting for an undertaking's Scope 1, 2 and 3 GHG emissions and for avoided emissions from products based on comparative assessments are complementary but fundamentally different concepts. Consequently, the [draft] Standard requires undertakings to foremost disclose Scope 1, 2, and 3 emissions and related reduction targets. Comparative assessments shall neither take precedence over nor detract an undertaking in this regard. Comparative impacts shall not be used to adjust Scope 1, 2, and 3 emissions or claim GHG reduction target achievement.

BC413. **Accounting methodology**: There is currently no generally accepted methodology to quantify avoided emissions. Therefore, it is suggested that an undertaking reporting shall in addition to a quantitative indicator provide details on the calculation methodology, in particular on the life-cycle emissions included and the assumptions made for determining additionality. Moreover, any estimates of avoided emissions shall be reported separately from an undertaking's GHG inventory.

GHG intensity

BC414. **The [draft] standard includes the following Disclosure Requirement 20: "The undertaking shall disclose its total GHG emissions per net turnover".**

BC415. **EU legislation and global reporting frameworks**: This disclosure relies on the SFDR-RTS and European Commission's Guidelines on reporting climate-related information. This disclosure is compatible with TCFD, IFRS, GRI, CDP. This disclosure answers the requirement on GHG intensity of investee companies from RTS on ESG disclosure under the SFDR. Both TCFD guidance on metrics, targets and transition plans and IFRS climate prototype ask for the metric of emissions intensity. 305-3 requires the disclosure of GHG emissions intensity. CDP asks the reporting of any additional intensity metrics for Scope 1 and 2 emissions.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
GHG intensity		SFDR, Climate and other environmental-related indicators 3.	TCFD, Guidance on metrics, targets, and transition plans (2021), Cross-industry, climate-related metric categories IFRS, Climate-related Disclosure Prototype

WORKING PAPER

			(2021), Disclosure 13 (a) GRI 305-4 CDP, Questionnaire (2021), C6.10

Disclosure Requirements to be considered in future sets of standards

BC416. GHG emissions (Scope 1, 2 and 3) breakdowns by [economic activity] [sector] were considered. However, as the information requires preparation and a robust internal accounting systems to the chosen classification, it was decided not to include it at this stage.

BC417. GHG intensity per activity (tCO_2e/unit of production) was considered because denominators relying on sectoral production units increase the quality and relevance of information. The disclosure was not retained for this standard as it is sector specific.

BC418. GHG intensity per tertiary activities (tCO_2e from offices and business travels per Full Time Equivalent) was considered. The disclosure aims to address tertiary activities whatever the sector and support EU decarbonisation objectives in accordance with the European Climate Law. However, as the emission sources concerned are limited and therefore less of a priority and the perimeter of the denominator corresponding to the one of the nominator is difficult to obtain, the disclosure requirement was not retained.

BC419. GHG intensity of used upstream and downstream logistics services (tCO_2e from goods transported/tons of goods transported) was considered for undertakings that pursue activities in the sectors for which the transportation of goods is relevant. The disclosure aims to address transport activities and support EU decarbonisation objectives in accordance with the European Climate Law. The disclosure was not retained as it is sector specific.

Financial Exposure to Transition and Physical Risks; Financial Opportunities

Background

BC420. The speed of transitions and of technical change required to limit global warming to 1,5°C and adapt to climate change has been observed in the past within specific sectors and technologies. But the geographical and economic scales that are currently required in the energy, land, urban, infrastructure and industrial systems are larger and have no documented historic precedent.

BC421. While companies must align with the 1,5°C pathways, they also need to mitigate the risks posed by the transition to a low-carbon and climate-resilient economy. Such transformations would require anticipated planning and strong institutions as well as significant coordination and disruptive innovation across actors and scales of governance.

BC422. The IPCC's 2018 Special Report on 1,5°C[135] states that governance consistent with limiting warming to 1.5°C and the political economy of mitigation and adaptation are expected to enable and accelerate systems transitions, behavioural change, innovation and technology deployment. For instance, an effective governance framework would include coordinated sectoral and cross-sectoral policies, strengthened global-to-local financial architecture, addressing climate-related trade barriers, strengthened climate monitoring and evaluation systems.

BC423. The IPCC specifies that finance consistent with limiting warming to 1,5°C would require large increases of investments in low-emission infrastructure and buildings, along with a redirection of financial flows towards low-emission investments. Enabling this investment

[135] IPCC, "Special Report on Global Warming of 1.5 °C", 2018. Available here.

WORKING PAPER

requires the mobilization and better integration of a range of policy instruments that include the reduction of socially inefficient fossil fuel subsidy regimes and innovative price and non-price national and international policy instruments. These would need to be complemented by de-risking financial instruments and the emergence of long-term low-emission assets.

BC424. The IPCC also specifies the list of climate-related physical risks, including but not limited to the increase in water and soil temperatures, the sea level rise, the melting of glaciers and ice caps, the changes in ocean currents, the disruption of the water cycle (floods, droughts, submersions, cyclones), extreme events (heat peaks, fires), the increase in the ozone hole, the decline in marine and land biodiversity, and the decrease in freshwater resources.

BC425. Economic losses from weather and climate-related disasters have been increasing, in particular due to more frequent climate-related extreme weather. In the EU, these losses alone already average over €12 billion per year. Conservative estimates show that exposing EU economy to global warming of 3°C above pre-industrial levels would result in an annual loss of at least €170 billion. Climate change affects not only the economy, but also the health and well-being of Europeans, who increasingly suffer from climate physical risks such as heatwaves and floods. The deadliest natural disaster of 2019 worldwide was the European heatwave, with 2500 deaths.[136]

BC426. The IPCC outlines that exposure and vulnerability are key determinants of disaster risks and of impacts when risk is realised. Extreme and non-extreme weather or climate events affect vulnerability to future extreme events by modifying resilience, coping capacity, and adaptive capacity. A changing climate leads to changes in the frequency, intensity, spatial extent, duration, and timing of extreme weather and climate events, and can result in unprecedented extreme weather and climate events. Disaster risk management and adaptation to climate change can reduce exposure and vulnerability to weather and climate events and thus reduce disaster risk, as well as increase resilience to the risks that cannot be eliminated.

BC427. The manifestations of climate change can impact companies at all levels of their value chain and may affect all and any part of a company's financials, including expenditures, revenues, assets and liabilities, capital and financing. The increasing severity and frequency of extreme climate change-related events, as well as longer-term progressive shifts in the climate trigger economic costs and financial losses [137].

BC428. The IPCC concludes that limiting warming to 1.5°C above pre-industrial levels would require transformative systemic changes, integrated with sustainable development. Such changes would require the upscaling and acceleration of the implementation of far reaching, multilevel and cross-sectoral climate mitigation and addressing barriers. Such changes would also need to be linked to complementary adaptation actions, including transformational adaptation, especially for pathways that temporarily overshoot 1.5°C.

BC429. Thus, to mitigate transition and physical risks, system-wide technical, institutional and socio-economic transitions would be required, as well as the implementation of a range of specific mitigation and adaptation options.

WORKING PAPER

EU legislation and recommendations

BC430. The draft CSRD[138] stresses that "with regard to climate-related information, users are interested in knowing about undertakings' physical and transition risks, and about their resilience to different climate scenarios".

[136] Communication from the Commission Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate (COM/2021/82). Available here.

[138] Proposal for a directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Available here.

BC431. Under the NFRD[139], climate-related information should, to the extent necessary, include both the principal risks to the development, performance and position of the company resulting from climate change, and the principal risks of a negative impact on the climate resulting from the company's activities (double materiality principle).

BC432. The European Commission's Guidelines on reporting climate-related information[140] define recommend to "disclose the financial impacts of extreme weather events, including possible indicators on days of business interruptions and associated costs, cost of repairs, fixed-asset impairment, value chain disruptions and lost revenues" and to "describe how the company's performance is affected by weather variability, in particular for companies sensitive to variability in temperature and precipitation".

BC433. The EBA[141] identifies slight differences between existing definitions of transition risks and selects the following one: transition risks are the risks of any negative financial impact on an institution stemming from the current or prospective impacts of the transition to an environmentally sustainable economy.

(a) The EBA clarifies that liability risks refer to legal risks and are defined as the risks stemming from people or businesses seeking compensation for losses they may have incurred due to ESG factors, e.g. when institutions' counterparties are held accountable for the negative impact they have on ESG factors through their activities.

(b) Moreover, the EBA clarifies that transition risks can also have an impact on individuals – for example, when they are owners of a property that becomes subject to stricter energy-efficiency requirements – as well as on sovereigns – for example, when the transition causes mass unemployment in carbon-intensive sectors and therefore a deterioration of tax income, or when there needs to be increased public spending, for example to facilitate the transition of the domestic economy.

BC434. The EBA's public consultation related to draft technical standards on Pillar 3 disclosures of ESG risks[142] includes specific templates for the disclosure of physical risks based on a cross sectoral and geographical approach. The proposed disclosures are both quantitative (gross carrying amount exposed to physical risks, as defined in the Taxonomy Regulation, including a split between performing and non-performing exposures) and qualitative (data sources and methodology used). The main feedbacks from industry and non-industry stakeholders are summarised below.

(a) Such requirements would create a dependency on external data providers who do not share the same metrics or the same granularity and will likely have an insufficient coverage of risk events. External data providers may also use various proxies within their methodologies, which are very broad and may lack conclusive relevance, for example in approaches to take supply chain into account or a corporate's adaptation strategy. This would undermine the consistency and meaningfulness of the disclosed information.

(b) Credit establishments' in-house methodology may lack maturity for some time, especially for establishments with subsidiaries outside the EU.

(c) The templates should not assume a relationship between prudential metrics and physical risks.

(d) The information on the maturity of the loan and on the lifespan of the underlying asset should be included in the template.

(e) Physical risks should be reported in a qualitative manner and order of magnitude per large geographical areas and sectors only.

WORKING PAPER

[139] Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups. Available here.

[140] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

[141] EBA, "Report on Management and Supervision of ESG Risks for Credit Institutions and Investment Firms", 2018. Available here.

[142] EBA, Consultation Paper on Draft Technical Standards on Pillar 3 disclosures of ESG risks, 2021. Available here.

(f) It is not clear whether inherent or residual risks shall be disclosed and whether the frequency of such disclosures should depend on the level of risk associated.

BC435. The European Commission's Strategy on Adaptation to Climate Change[143] aims at making Europe a climate-resilient society by 2050, adaptable to the unavoidable impacts of climate change. Its objectives are improving knowledge of climate impacts and adaptation solutions; stepping up adaptation planning and climate risk assessments; accelerating adaptation action; and helping to strengthen climate resilience globally. It states: "It is vital for the private and public sectors to work together more closely, in particular on financing adaptation. The strategy, with the focus and the tools it provides, will support the private sector to identify risks and steer investment towards action on adaptation and resilience (and avoid maladaptation). By offering solutions to help meet the rising awareness of climate impacts (such as the non-financial disclosure obligations, the Taxonomy Regulation[144] for sustainable activities and the Renewed Sustainable Finance Strategy), it will help large companies, SMEs, local administrations, social partners, and the public. It will also help correct the misperception that adaptation is solely a cost - it is an investment".

BC436. The European Insurance and Occupational Pensions Authority (EIOPA)[145] aims to address key issues of climate change-related risk for the insurance sector.

(a) The EIOPA published the Pilot dashboard for the natural catastrophe protection gap. It brings together data on economic and insured losses, vulnerabilities and exposure, as well as insurance coverage across the EU Member States. Only 35% of the total losses caused by extreme weather and climate-related events across Europe are insured.

(b) The EIOPA also released a methodological paper for integrating climate change in underwriting risk capital charge of the Solvency II standard formula. It proposes methodological steps which support the need to formalise an approach to re-assess and, where needed, recalibrate parameters for the natural catastrophe risk module of the Solvency II standard formula on a regular basis. The regular re-assessment or recalibration would integrate new considerations such as use of models, which explicitly consider climate change, as well as the possibility to include new countries. The paper also identifies the need to enhance the understanding on emerging perils such as wildfire or droughts such as increased frequency and severity of natural catastrophes.

(c) The EIOPA finally drafted the report on non-life underwriting and pricing in light of climate change. It investigates the opportunity for (re)insurers, as risk managers and underwriters, to contribute to climate adaptation, by supporting the insurability of climate change-related risks. Through risk-based pricing, contractual terms, and underwriting strategy (re)insurers should consider implementing measures for climate change adaptation.

BC437. Among the policy risks triggered by the transition to a low-carbon economy, carbon pricing has emerged as a key policy mechanism to drive GHG emissions reductions. Carbon pricing's policies primarily manifest in two ways: the emissions trading scheme and the carbon tax. The World Bank[146] indicates that carbon-pricing policies currently exist in 42 countries at the national level and 25 areas at the subnational level – numbers that have almost doubled since 2012. The EU ETS is a primary policy underpinning the EU's goal of reducing emissions at least 55% by 2030.

WORKING PAPER

[143] Communication from the Commission Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate (COM/2021/82). Available here.

[144] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Taxonomy Regulation). Available here.

[145] EIOPA, News "EIOPA further contributes to sustainable finance", 2021. Available here.

[146] The World Bank, "Carbon Pricing Dashboard", 2017. Available here.

Global reporting frameworks

BC438. The climate-related disclosures prototype developed by the TRWG of the IFRS[147] introduces the following cross-industry metrics related to the financial exposure to transition and physical risks and financial opportunities, without detailing the calculation methods:

(a) "transition risks – the amount and percentage of assets or business activities vulnerable to transition risks;

(b) physical risks – the amount and percentage of assets or business activities vulnerable to physical risks;

(c) climate-related opportunities – the proportion of revenue, assets or other business activities aligned with climate-related opportunities, expressed as an amount or as a percentage".

BC439. TCFD's guidance on metrics, targets and transition plans[148] acknowledges that transitioning to a lower-carbon economy may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change. It argues that depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organisations.

BC440. Therefore, TCFD encourages organisations to describe the "amount and extent of assets or business activities vulnerable to transition risks". It specifies that "organizations can be vulnerable to several types of climate-related transition risks: a) policy and legal risks reflecting changes in policy and litigation action; b) technology risk as emerging technologies impact the competitiveness of certain organizations; c) market risk from changes to supply and demand; and d) reputational risks tied to changing customer or community perceptions".

BC441. TCFD also argues that physical risks may have financial implications for organisations, such as direct damage to assets and indirect impacts from supply chain disruption. It points out that organisations' financial performance may also be affected by changes in water availability, sourcing, and quality; food security; and extreme temperature changes affecting organisations' premises, operations, supply chain, transport needs, and employee safety.

BC442. Consequently, TCFD encourages organisations to disclose the "amount of extent of assets or business activities vulnerable to physical risks". It specifies that "organizations might be vulnerable to, distinguishing between a) acute risks, such as hurricanes, floods, and wildfires, that are event-driven and b) chronic risks, such as higher temperatures and sea-level rise, that refer to longer-term shifts in climate patterns".

BC443. Finally, TCFD's guidance on metrics, targets and transition plans proposes the following financial metric, "proportion of revenue, assets or business activities aligned with climate-related opportunities" based on key categories of commonly accepted opportunities. The first one relates to the share of green turnover covering low carbon activities as well as transition and enabling activities that is required under the Taxonomy Regulation[149].

BC444. The CDP questionnaire about climate-related risks and opportunities is directly connected with TCFD recommendations. The CDP requests companies to detail the risks identified along with the potential to have a substantive financial or strategic impact on their business. This includes the provision of a single figure or an estimated range for the inherent financial impact of the risks (before taking into consideration any controls they may have in place to mitigate the impacts).

BC445. The European Bank for Reconstruction and Development's Report on Advancing TCFD guidelines on physical risks and opportunities[150] states that undertakings should disclose

WORKING PAPER

[147] TRWG of the IFRS, "Climate-related disclosures prototype", November 2021. Available here.

[148] TCFD, "Guidance on Metrics, Targets, and Transition Plans", October 2021. Available here.

[149] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Taxonomy Regulation). Available here.

[150] EBRD's Report "Report: Advancing TCFD Guidance on Physical Climate Risks and Opportunities" (2018).

a set of physical risk assessment covering hazard, sensitivity all along the value change as well as on the undertaking's performance (see summary table in Annex 1).

BC446. The ISO published in 2021 a general framework[151], including principles, requirements and guidance for assessing, measuring, monitoring and reporting on investments and financing activities in relation to climate change and the transition into a low-carbon economy. The assessment includes the impact of actions on the achievement of climate goals in the real economy, i.e., mitigation (greenhouse gas emissions) and adaptation (resilience), as well as the risks arising from climate change. It supports standardised reporting for financial institutions on global level, aims at increased transparency and is also suitable to identify, assess and monitor climate action of non-state actors (e.g., Non-State Actors Zone for Climate Action platform hosted by UN Climate Change).

Users' needs (Physical Risks)

BC447. Disclosing metrics to assess climate-related physical risks allows preparers and users to better understand, track and estimate potential financial exposure regarding such issues as impairment or stranding of assets, value of assets and liabilities, and changes in cost of business interruptions.

BC448. In particular, indicators are needed in order to increase transparency in the methodology, so that the outcomes can be directly understood by all users, including but not limited to investors, insurance companies, financial institutions and decision makers.

BC449. From the perspective of financial institutions, physical risks may impact their counterparties in the real economy (in terms of physical facilities, as well as financial results) and hence drive financial risks. In turn, it exposes the financial institutions to financial risks, which ought to be disclosed to the stakeholders.

Users' needs (Transition Risks)

BC450. The undertaking should embed impact assessment of transition risks in its strategy and be able to measure its own transition risks in order to transform its business model. In this regard, it is crucial for a company to see if a business partner is exposed to many transition risks, potentially having an impact on its own transition risk. Thus, transition risk measurement is key to ensure the definition of a resilient business model for any company.

BC451. Stakeholders and particularly investors and financial institutions should be provided with any information from non-financial companies that enables users to understand how transition risks are identified, assessed and managed. These disclosures should be completed by performance management indicators to illustrate the results of the deployed risk management framework.

BC452. The EBA's report on management and supervision of ESG risks for credit institutions and investment firms[152] states that it is essential to agree on common qualitative and quantitative indicators and methods to assess financial impact of ESG risks on activities of financial institutions. Commonly agreed methodologies are fundamental to support decision-making, to ensure a level playing field, and to enhance transparency, consumer protection and disclosures.

BC453. Nevertheless, the EBA also lists a number of challenges to reach the integration of ESG risks into institutions management process, notably the following.

(a) Level of uncertainty: The timing and effect of policies or of civil society behaviour are difficult to predict.

(b) Insufficient data: The scarcity of relevant, comparable, reliable and user-friendly data limits the understanding of the potential impacts of ESG risks on the financial

[151] ISO 14097:2021 "Greenhouse gas management and related activities — Framework including principles and requirements for assessing and reporting investments and financing activities related to climate change". Available here.

[152] EBA, "Report on Management and Supervision of ESG Risks for Credit Institutions and Investment Firms", 2018. Available here.

WORKING PAPER

performance of an institution. It remains challenging to translate the available ESG data into expectations for the financial performance of a counterparty.

(c) Methodological constraints: Most of the risk management models are based on the use of historical data (i.e. historical experience) to estimate current or future risks. ESG factors are frequently not reflected in these data. Other methodological constraints include translating ESG risks into financial risks, understanding their impact on the resilience of business models.

(d) Time-horizon mismatch between 'traditional' management tools and the timeframe for the materialisation of ESG risks: particularly, the full impact of environmental factors often develops over decades.

BC454. The EBA describes the first step to be taken by financial institutions to develop robust and comparable methodologies on transition risks as the identification of climate-related transition risk factors. These factors should be derived from indicators based on existing common taxonomies and standards. Some of these indicators are more relevant or material to certain economic activities or sectors. The EBA proposes the following non-exhaustive quantitative metrics to be used as inputs of methodologies to identify risk factors and measure their transition risk impact:

(a) Emissions: total absolute GHG emission value broken by scope (1,2,3), carbon footprint (emissions in relative value), % of fossil fuel sector (relates to the production, processing, distribution, storage or combustion of fossil fuels),

(b) Energy efficiency: energy consumption intensity and use of renewable sources of energy.

BC455. On the one hand, energy efficiency metrics should meet the need to analyse the efficient use of energy or carbon emissions at the corporate level. In this case, the intensity ratio should be calculated based on a denominator defined at sector or activity level. On the other hand, energy efficiency metrics should enable financial institutions to feed their transition risk analysis as per SFDR or ECB climate stress test guidelines, using revenues-based intensity metrics. For instance, the SFDR[153] requires investors to disclose in their principal adverse impacts statements the energy and carbon intensity of their investment based on a metric calculated through revenue-based denominators.

BC456. The EBA describes the second step to be taken by financial institutions to measure their exposure to transition risks as the identification of the transmission channel. The NGFS[154] underlines the predominant role of stranded assets in transmitting the transition financial impact from corporates to financial institutions.

BC457. The disclosure of stranded assets value and share is considered by the EBA as the starting point of the valuation of exposure of assets impacted by transition risks. The estimation of stranded assets should be addressed in a forward-looking perspective with the following disclosure on scope and methodology according to the IEA:

(a) Scope: physical assets whose costs cannot be recovered with important stranding risks in the long-lived power generation plants,

(b) Methodology and especially the period considered over which foregone revenues are taken into account (this period must be longer than usual period considered in accounting standard for assets depletion),

(c) Key assumptions: future prices, underlying scientific scenario, policy framework facilitating the transition, etc.,

(d) Value: book value.

BC458. However, approaches relying on stranded assets exposure could lead to an over representation of the energy sector, as there is no clear definition of stranded assets EU

[153] Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector. Available here.

[154] NGFS, "Overview of Environmental Risk Analysis by Financial Institutions", 2020. Available here.

WORKING PAPER

wise. Moreover, focusing only on stranded assets may result in missing other risks related to business disruptions or carbon prices increase in the value chain for instance.

BC459. Additionally, these approaches raise the issue of connectivity with financial information. The IASB[155] indirectly addresses the issue of financial impact on assets stemming from climate related risk drivers: "IAS 16 and IAS 38 require companies to review the estimated residual values and expected useful lives of assets at least annually, and to reflect changes — such as those that might arise from climate-related matters — in the amount of depreciation or amortisation recognised in the current and subsequent periods. Climate-related matters may affect the estimated residual value and expected useful lives of assets, for example, because of obsolescence, legal restrictions or inaccessibility of the assets. Companies are also required to disclose the expected useful lives for each class of asset and the nature and amount of any change in estimated residual values or expected useful lives. IAS 36 requires disclosure of the events and circumstances that led to the recognition of an impairment loss, for example, the introduction of emission-reduction legislation that increased manufacturing costs. Disclosure of key assumptions used to estimate the asset's recoverable amount, as well as information related to reasonably possible changes in those assumptions, is also required in specified circumstances."

BC460. The draft RTS under SFDR[156] specifies that the statements of principal adverse impact require investors to disclose the exposure to companies that are active in the fossil fuel sectors. The following definition is provided: (i) companies that derive any revenues from exploration, mining, extraction, distribution or refining hard coal and lignite; (ii) companies that derive any revenues from the exploration, extraction, distribution (including transportation, storage and trade) or refining of liquid fossil fuels; and (iii) companies that derive any revenues from exploring and extracting fossil gaseous fuels or from their dedicated distribution (including transportation, storage and trade). These indicators could enable to measure the transition risks within a sectoral specific approach.

BC461. The ESAs also define an additional Disclosure Requirement measuring investments in companies without carbon emission reduction initiatives. This disclosure could provide stakeholders with a qualitative relevant information on the transition risk management of the undertaking.

BC462. To be more comprehensive and aligned with clear technical criteria, disclosure of transition risk exposures and notably to carbon-related assets should probably be directly correlated to the 'Significantly Harmful' (SH) Taxonomy Regulation clearly describing carbon intensive activities for which sustainable replacement technologies exist, that should be in the scope of "stranded assets". In its reports on Taxonomy Extension[157], the Platform for Sustainable Finance (PSF) notes in its Public Consultation Report on Taxonomy extension options linked to environmental objectives that an SH-extension will help identify and prioritise the economic activities for which the urgent transition towards better environmental performance has to be supported to avoid significant harm.

BC463. While acknowledging that stakeholders often have strong and divergent views of what characterises economic activities that are significantly harmful to environmental sustainability, the PSF proposes solutions to identify harmful activities. These activities could be identified according to the do no significant harm criteria (DNSH) already embedded in the Taxonomy Regulation[158] on environmental objectives. Therefore, the Platform concludes that failing the DNSH criteria is technically equivalent to causing significant harm.

BC464. However, the Platform recognises that the DNSH criteria should be reviewed to assess if its formulation is fit-for-purpose, as DNSH are not always suitable to define Significant Harmful (SH) activities, defined as activities for which no technical possibility of improving

WORKING PAPER

[155] IFRS, Effects of Climate related Matters on Financial Statements, 2020. Available here.

[156] ESAs, "Final Report and Draft Regulatory Technical standards", 2021. Available here.

[157] Platform on Sustainable Finance, "Public Consultation Report on Taxonomy extension options linked to environmental objectives", July 2021. Available here.

[158] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Taxonomy Regulation). Available here.

their performance to avoid significant harm exists across all environmental objectives. In light of these considerations, the Platform proposes to define the taxonomy of significantly harmful activities as consisting of two components: a) the activities for which no technological possibility of improving their environmental performance to avoid significant harm exists, as is the case for the power generation activity using fossil fuels already identified in Article 19 (3) of the Taxonomy Regulation[159]; b) the activities that fail performance levels set by DNSH technical screening criteria in delegated acts where such DNSH criteria exists.

BC465. Finally, the Platform identifies a high risk of misinterpreting and misunderstanding the activity's level of performance according to screening criteria measuring substantial contribution or significant harm. Thus, the Platform proposes three levels of performance to describe contributing activities performance, an intermediate performance and a significant harmful performance. A reporting on these three levels of performance is not required yet but could be explored by regulators. This may help companies develop clear activity-specific transition plans and access finance for those transitions in a very clear and transparent way, less subject to individual views of shareholders or stakeholders. Further works are needed to clarify what could be required as a significant harm activity as misinterpretation of reported information could lead to counterproductive effects on the financial stability of the EU economy and markets. For instance, defining stranded assets "by legislation", could lead to increase transparency on risks that are already there, thus increasing transition risk. This could also negatively affect the financing of companies with a high share of turnover deriving from harmful activities in a disorderly way. This could also have impact on banks financing these companies, affecting on both retail customers and on the wholesale markets stability. Finally, this could disadvantage EU companies vs. non-EU jurisdictions which would call for further efforts for alignment internationally.

Conclusions

BC466. The undertaking shall disclose qualitative information regarding the climate-related risk, vulnerability and opportunities assessment, including the identification and assessment processes about their resilience to different climate scenarios, in the "Impacts, Risks and Opportunities" reporting area. If undertakings identify principal climate-related risks, they shall then disclose the estimated financial effects in the "Performance Measures" section.

BC467. No common methodology exists yet to disclose quantitative financial measurements of such risks and opportunities. Under these circumstances, the disclosure of the quantified financial effects of climate-related risks or opportunities is proposed without a requirement on the quantification methodology.

BC468. Concerning the disclosure of the financial exposure to physical risks, the European legislation and guidelines (especially the European Commission's Guidelines on reporting climate-related information[160], Climate adaptation strategy[161] and Taxonomy Regulation[162] requiring as a DNSH criteria to perform a robust climate risk and vulnerability assessment), as well as global reporting frameworks and methodologies, provide undertakings with the best-in-class management and reporting practices for physical risks.

BC469. Consequently, robust scenario analysis should be disclosed by undertakings in order to identify the most relevant impacts and vulnerabilities to hazards physical events along the value chain (see "Impacts, Risks and Opportunities" reporting area). This would allow to identify the relationship between the undertaking's physical risks (mature methodologies

WORKING PAPER

[159] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Taxonomy Regulation). Available here.

[160] Communication from the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information (C/2019/4490). Available here.

[161] Communication from the Commission Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate (COM/2021/82). Available here.

[162] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (Taxonomy Regulation). Available here.

exist) and its financial exposure. Thus, undertakings should disclose their amount of assets exposed to physical risks and share of turnover from its business activities exposed to physical risks.

BC470. Concerning the disclosure of the the financial exposure to transition risks, it is recognised that methodologies are highly dependent on the business model of the undertaking itself, on carbon pricing policies and mechanisms, on common definition of assets at risks, and on common definition of significantly harmful activities.

BC471. Nevertheless, it is essential to require information comparable and proportionate to all undertakings covered by the draft CSRD, the required information relating to transition risks should then be based on a common state of play.

BC472. Therefore, undertakings should disclose their future financial position in terms of assets exposed to transition risks, covering stranded assets with significant locked-in GHG emissions, and of liabilities that may have to be recognised over the short, medium, and long-term, including the financial consequences of participating in Cap & Trade schemes such as the EU ETS allocation plan. Moreover, undertakings should disclose their future financial performance in terms of share of turnover from their business activities exposed to transition risks, including the screening of their activities significantly harmful to climate change mitigation and the mapping of the activities through the lens of transition risk events.

BC473. Future enhancement of the ESRS accuracy and comparability may rely on standardised methodologies and more specifically on a potential classification of significant harmful activities, as described in the Public Consultation Report on Taxonomy extension options linked to environmental objectives[163] published in July 2021 by the Platform on Sustainable Finance. The proposed framework of a potential EU Taxonomy extension could be a building block (common definition and common science based technical criteria) of a standardised risk and opportunities quantification.

BC474. Concerning the disclosure of climate-related financial opportunities, based on TCFD requirements, it is considered that undertakings should disclose the financial effects of climate related opportunities stemming from the development of products and services for climate change mitigation and adaptation.

Choice of specific disclosures

Financial exposure to physical risks

BC475. **The [draft] standard includes the following Disclosure Requirement 21: "The undertaking shall disclose its financial exposure to physical risks".**

BC476. As proposed in "Impacts, Risks and Opportunities" reporting area, the undertaking shall describe as a first step the processes for identifying and assessing principal climate-related physical risks and the results of such processes. The undertaking shall then disclose as a second step their financial exposure to the previously identified physical risks because these physical risks may affect the financial position (owned assets) and performance (potential future increase/decrease in revenues and costs due to business interruptions, increased supply prices, etc. resulting in potential margins erosions) of the undertaking.

BC477. Several methodologies and tools have already been developed and are used on the market worldwide. The approach is usually based on three steps: physical risks exposure (disclosed under "Impacts, Risks and Opportunities), financial impact assessment (disclosed under "Financial Exposure to Physical Risks") and risks mitigation actions (disclosed under "Climate Action Plans and Resources"). The most advanced methodologies recommend modelling IPCC scenarios with geographical location of assets and supply chain/customers countries on various time horizons. Thus, the use of models allows to identify first the climate-related hazards such as heat and cold waves, number of frost days per year, heavy precipitations, wind intensity change, etc. and then the own

[163] Platform on Sustainable Finance, "Public Consultation Report on Taxonomy extension options linked to environmental objectives", July 2021. Available here.

WORKING PAPER

assets subject to these climate-related hazards and the business activities exposed to physical risks and its related turnover.

BC478. The business activities are exposed to hazards impacting own assets and employees but also impacting the value chain (suppliers and customers) which indirectly may damage the undertaking's business activities and cash flows through for instance business disruption, increased supply prices or customers preference shift. The share of turnover of these business activities potentially affected by physical risks could only be an estimated range at this stage.

BC479. The information required on financial exposure to physical risk shall reflect and be read in parallel with the following reporting areas: "Impacts, Risks and Opportunities" for the identification and assessment of physical risks, and "Climate Action Plans and Resources" for the action plans to adapt to physical risks and the resources related to adaptation solutions.

BC480. This disclosure builds on the European Commission's Guidelines on non-financial reporting as well as on TCFD and IFRS. Both TCFD guidance on metrics, targets and transition plans and IFRS climate prototype require the disclosure of "the amount and extent of assets of business activities vulnerable to physical risks" without providing more details on the methodology.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Financial exposure to physical risks		Commission, Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019), Recommended disclosures and further guidance 3.4	TCFD, Guidance on metrics, targets, and transition plans (2021), Cross-industry, climate-related metric categories IFRS, Climate-related Disclosure Prototype (2021), Disclosure 13 (c)

BC481. **Application provisions:** The [draft] CSRD proposal introduces in Article 19b the possibility to have two sets of standards by 2022 and 2023 hence allowing deferred applications of some disclosure requirements. In order to ease the first-time application of the [draft] standard, the undertaking may elect not to apply the data point (b) on the share of turnover from its business activities exposed to physical risks in the disclosure requirement 21 of financial exposure to physical risks for the first reporting period. The financial effects of physical risks on business activities are more complex to assess than the ones on assets, because business activities cover the whole value chain and therefore involve the monitoring of multiple criteria and factors that are difficult to model at the current stage of maturity of the market.

Financial exposure to transition risks

BC482. **The [draft] standard includes the following Disclosure Requirement 22: "The undertaking shall disclose its financial exposure to transition risks".**

BC483. As proposed in "Impacts, Risks and Opportunities" reporting area, the undertaking shall describe as a first step the processes for identifying and assessing principal climate-related transition risks and the results of such processes. The undertaking shall then disclose as a second step their financial exposure to the previously identified transition risks because these physical risks may affect the financial position (assets and liabilities) and performance (potential future increase/decrease in revenues and costs due to transition risk events such as increased external carbon pricing, technological innovation, shift of

WORKING PAPER

market demand for certain commodities, etc. resulting in potential margins erosions) of the undertaking.

BC484. Currently no commonly agreed methodology exists to assess or measure how climate-related transition risks and opportunities may affect the future financial position and performance of the undertaking.

BC485. It is quite clear from the perspective of the EBA and NGFS that the methodologies used by financial institutions to assess transition risks stemming from climate factors still need to be improved. Thus, at this stage, financial institutions can only rely on qualitative assessments of the risk management process of their counterparty/investee as well as on quantitative metrics used by their counterparts/investees to manage and monitor their climate related risks and opportunities.

BC486. The PSF's proposal of an extended taxonomy raises the need to better define implementation options of a significant harm taxonomy. This proposal could be the building block to define transition risk metrics. One of the objectives would be to explore how the indicators/metrics relevant to the DNSH criteria could be made coherent with other indicators/metrics within the overall sustainable finance framework for improved usability.

BC487. At global level, TCFD's guidance on metrics, targets and transition plans includes a disclosure of "proportion of assets and/or operating, investing, or financing activities materially exposed to transition risk". At this stage, no further guidance is provided to define comparable technical criteria or methodology.

BC488. Therefore, the undertaking shall disclose their financial exposure to transition risks according to free methodology.

BC489. The information required on financial exposure to transition risk shall reflect and be read in parallel with the following reporting areas: "Impacts, Risks and Opportunities" for the identification and assessment of transition risks, and "Climate Action Plans and Resources" for the action plans to mitigate transition risks and the resources related to mitigation solutions.

BC490. This disclosure builds on TCFD and IFRS. Both TCFD guidance on metrics, targets and transition plans and IFRS climate prototype require the disclosure of "the amount and extent of assets of business activities vulnerable to transition risks" without providing more details on the methodology.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Financial exposure to transition risks			TCFD, Guidance on metrics, targets, and transition plans (2021), Cross-industry, climate-related metric categories IFRS, Climate-related Disclosure Prototype (2021), Disclosure 13 (b)

BC491. **Application provisions**: The [draft] CSRD proposal introduces in Article 19b the possibility to have two sets of standards by 2022 and 2023 hence allowing deferred applications of some Disclosure Requirements. In order to ease the first-time application of the [draft] standard, the undertaking may elect not to apply the data point (b) on the future financial performance in terms of share of turnover from its business activities exposed to transition risks in the Disclosure Requirement 22 of financial exposure to transition risks for the first reporting period. The financial effects of transition risks on business activities are more complex to assess than the ones on assets and liabilities, because business activities cover the whole value chain and therefore involve the

WORKING PAPER

monitoring of multiple criteria and factors that are difficult to model the current stage of maturity of the market.

Financial opportunities related to climate change mitigation or adaptation other than the Taxonomy Regulation

BC492. **The [draft] standard includes the following Disclosure Requirement 23: "The undertaking may disclose its financial opportunities that relate to climate change mitigation or adaptation and that complement the Taxonomy Regulation related ones".**

BC493. The information related to the market size for low carbon products and services or adaptation solutions over the short-, medium-, and long-term shall be read in conjunction with the information disclosed under the provisions of the Taxonomy Regulation. It should help users put in perspective the current Taxonomy regulation green turnover ratio in comparison with the potential of the market for low carbon or adaptation products and services. The definition of low carbon products and services remains an issue justifying the choice for an optional disclosure. One of the suggested possible definition would be to build upon avoided emissions definition and to disclose the planned revenues from products and services associated with avoided emissions. Another possibility is to define criteria for green products and services and to monitor the development of these portfolios.

BC494. This disclosure builds on TCFD and IFRS. Both TCFD guidance on metrics, targets and transition plans and IFRS climate prototype require the disclosure of "the proportion of revenue, assets or other business activities aligned with climate-related opportunities, expressed as an amount or as a percentage" without providing more details on the methodology.

Disclosure Requirement (DR#)	Required specifically by CSRD	Required by other EU legislation and recommendations	Other international framework references / compatibility
Financial opportunities relating to climate change mitigation and climate change adaptation			TCFD, Guidance on metrics, targets, and transition plans (2021), Cross-industry, climate-related metric categories IFRS, Climate-related Disclosure Prototype (2021), Disclosure 13 (d)

WORKING PAPER

WORKING PAPER

Annex 1 to the Basis for conclusions: Tentative reconciliation table between the TRWG Climate-related Disclosures Prototype of the IFRS Foundation ('IFRS CP') and the EFRAG PTF-ESRS Climate change Working Paper ('ESRS E1')

This table presents a reconciliation between the TRWG Climate-related Disclosures Prototype of the IFRS ('**IFRS CP**') and the PTF-ESRS Climate change Working Paper ('**ESRS E1**'). A few points need to be considered while reading this table:

(a) the TRWG followed the four TCFD pillars, whereas EFRAG reporting areas reflect an undertaking's decision-making and reporting cycle164;

(b) EFRAG structure reflects the double materiality perspective and all ESG topics;

(c) though the two IFRS and EFRAG approaches propose two slightly different structures, the contents of the two standards are almost fully compatible as shown below – the missing elements to ensure full compatibility are under consideration;

(d) ESRS E1 proposes more comprehensive and detailed disclosure requirements through the application guidance; and finally

(e) dedicated sector-specific standards are developed separately by EFRAG, while IFRS CP includes industry disclosure requirements in Appendix B;

(f) wordings may be slightly different in some cases.

IFRS CLIMATE PROTOTYPE	ESRS E1	Comparison ESRS E1 vs IFRS CP
GOVERNANCE		
Based on IFRS Climate Prototype §4 (a) […] the identity of the body or individual within a body responsible for climate-related risks & opportunities;	➔ ESRS 3 DR 1 §6	**Information not yet explicitly covered in EFRAG working papers to be considered:** • details on (e) climate consideration of decisions on major transactions and trade-offs and sensitivity uncertainties **Major additions or classification differences in EFRAG:** • impacts considered in addition to Risks & Opportunities
(b) […] responsibilities for climate-related risks and opportunities reflection in terms of reference, board mandates and other relevant entity policies;	➔ ESRS 3 DR 1 §6 (a)	
(c) […] correct skills and competencies available […]	➔ ESRS 3 DR 1 §6 (b)	

[164] EFRAG PTF-NFRS report from February 2021: Proposals for a relevant and dynamic EU Sustainability Reporting standard-setting

(d) processes and frequency [for informing] the body and its committees […]	→ ESRS 3 DR 1 §6 (d)	• remuneration (IFRS CP §13 (g) directly tied to GHG emissions reductions targets in ESRS E1 §26 (b) • internal carbon pricing schemes classified under Metrics (IFRS CP §13 (f) versus under governance (ESRS E1 §29)
(e) consideration of climate-related risks and opportunities when overseeing strategy, decisions on major transactions, and risk management policies, inc.[...]	→ ESRS 3 DR 2 §9	
(f) overseeing and monitoring of targets and progress, including remuneration	→ ESRS 3 DR 1 §7 / ESRS 2	
(g) management's role in assessing and managing climate-related risks & opportunities and how the body oversees management in that role	→ ESRS 3, DR 4 §16, ESRS E1 DR 3	

WORKING P

IFRS CLIMATE PROTOTYPE	ESRS E1	COMPARISON EFRAG vs IFRS
STRATEGY		
Based on IFRS Climate Prototype §5 (a) [assessment of significant risks and opportunities • §6 (a): process for identification • §6 (b) and (c): time horizon definitions, interplay with strategic planning, capital allocation plans and financial effects of significant risks and opportunities • §6 (d): classification between physical and transition risks]	➔ ESRS E1 DR5 ➔ ESRS E1 DR2 (resilience), ESRS E1 DR5 (risks and opportunities), ESRS E1 DR8 (targets), ESRS E1 DR 9 (action plans), ESRS E1 DR9 (resources allocated) ➔ ESRS E1 DR6 (list of material risks and opportunities)	**Information not yet explicitly covered in EFRAG working papers to be considered:** • integration into financial planning (IFRS CP §8 (d) is not clearly stated • integration into judgements on uncertainties in the financial statements is not clearly mentioned **Major additions or classification differences in EFRAG:** • impacts taken into consideration on top of risks & ppportunities • impact on current financial statements (IFRS CP §9 (a)) is classified under Connectivity Requirements (reconciliation between sustainability and financial statements) • locked-in emissions more developed than corresponding concept of legacy assets in IFRS CP §8 (b) and related stranded assets • potential liabilities relating to ETS • financial position and business activities at risk split between physical and transition risks • taxonomy-alignment ratios and consistency of resources and financial opportunities with figures from Taxonomy regulation • clearer reference to alignment with limiting global warming to 1.5°C (i.e. transition plan) (IFRS CP §8 (a)) • concept of policies more developed • scope of the target specified
(b) [impact of significant risks and opportunities on the business model; • and §7 (a) and (b): how and where in the value chain]	➔ ESRS 2 DR4 (value chain), ESRS E1 DR2 (resilience)	
(c) [impact of significant risks and opportunities on management's strategy and decision making including its transition plans (§8) • §8 (a): response to significant risks and opportunities including plans to achieve targets, new technologies, R&D, direct and indirect adaptation and mitigation efforts and actions, offsets; • §8 (b): plans and critical assumptions for legacy assets, including decommissioning of intensive assets; • §8 (c): quantitative and qualitative information on progress of plans related to (a) and (b); • §8 (d): integration into financial planning process]	➔ ESRS E1 DR1 (transition plan) ➔ ESRS E1 DR8 (targets), ESRS E1 DR9 (action plans), ESRS E1 DR10 (resources), ESRS E1 DR17 and ESRS E1 DR18 (removals & offsets) ➔ ESRS E1 DR1 AG2 (locked-in emissions) ESRS E1 DR9 (action plans) ➔ Partially covered in ESRS 2 and ESRS 3	

WORKING PA

(d) [impacts of significant risks and opportunities on its financial position, financial performance and cash flows • §9 (a): impact on past financial performance, financial position and cash flows; • §9 (b): impact on financial position over time in line with the strategy, reflecting current and committed capital allocation and planned sources of funding; • §9 (c): impact on financial performance over time; • §9 (d): integration into judgements made or estimation uncertainties in the financial statements]	➔ Through connectivity disclosure requirements, ESRS 4 DR2 §18 . ➔ ESRS E1 DR 21, ESRS E1 DR22 (financial exposure to physical & transition risks) ➔ Partially covered	• target values aligned with 2030 and 2050 and preferably set over five years rolling periods • targets presented by decarbonisation levers • pathways to net zero presentation
(e) [Resilience of the entity's strategy to significant risks – physical impacts and transition to low carbon economy • §10 (a): description of scenario analysis and assumptions • §10 (b): results of the scenario analysis, assessment of how the entity's financial position and financial performance supports the resilience of the strategy and business model including: alignment or flexibility of assets, investments and capital, investment in lower carbon alternatives, reskilling workforce,…]	➔ ESRS E1 DR2 (resilience), ESRS E1 DR5 AG	

WORKING PAPER

<table>
<tr><th>IFRS CLIMATE PROTOTYPE</th><th>ESRS E1</th><th rowspan="2">COMPARISON EFRAG vs IFRS</th></tr>
<tr><th colspan="2">RISK MANAGEMENT</th></tr>
<tr><td>Based on IFRS Climate Prototype §11
(a) [Process to identify climate-related risks and (b) assess their significance (likelihood and impacts, prioritization relative to other types of risks including significant input parameters and changes in the process)]</td><td>➔ ESRS E1 DR5, ESRS 4 DR1</td><td rowspan="3">Information not yet explicitly covered in EFRAG working papers to be considered:
• integration into ERM
Major additions or classification differences in EFRAG:
• impacts taken into consideration on top of risks and opportunities
• concept of policies for mitigation and adaptation
• more detailed application guidance for physical and transition risks identification and assessment
• the concept of due diligence process will be further elaborated on in a future ESRS1</td></tr>
<tr><td>(b) [Risk monitoring, mitigation and management, including related policies]</td><td>➔ ESRS E1 DR7, ESRS E1 DR8, ESRS E1 DR 9 and ESRS E1 DR 10</td></tr>
<tr><td>(c) [Integration into ERM]</td><td>➔ Partially covered</td></tr>
</table>

WORKING PA

IFRS CLIMATE PROTOTYPE	ESRS E1	COMPARISON EFRAG vs IFRS
METRICS AND TARGETS		
Based on IFRS Climate Prototype §12 (a) [Cross-industry metrics §13 • §13 (a): GHG emissions scope 1,2 and 3 in absolute and intensity and §14 • §13 (b): assets or business activities vulnerable to transition risks • §13 (c): assets or business activities vulnerable to physical risks • §13 (d): revenue, assets or other business activities aligned with climate-related opportunities • §13 (e): capital expenditure, financing or investment deployed §13 (f): internal carbon prices • §13 (g): proportion of executive management remuneration affected by climate-related considerations]	→ Sector agnostic layer → ESRS E1 DR13 to ESRS E1 DR16 (GHG emissions) → ESRS E1 DR22 (Financial exposure to transition risks) → ESRS E1 DR21 (Financial exposure to physical risks) → ESRS E1 DR23 (Financial opportunities) and Taxonomy Disclosure Requirements → ESRS E1 DR10 (Resources) and Taxonomy Disclosure Requirements → ESRS E1 DR4 (internal carbon pricing schemes) → ESRS E1 DR3 (Remuneration incentives)	**Information not yet explicitly covered in EFRAG working papers to be considered:** • sector-specific standards to be developed separately **Major additions or classification differences in EFRAG:** • Energy consumption and mix, Energy and GHG emissions intensity per revenue • more details on GHG emissions (EU ETS, market vs location, categories of scope 3, total, removals, offsets, avoided) • more details on financial exposure and opportunities (stranded assets, assets at physical risks, ETS liabilities, business activities at risks, market size for low carbon solutions) • Turnover, CapEx, OpEx linked deriving from the EU Taxonomy regulation • specific target on GHG emissions reduction and remuneration tied to this target
(b) Industry-based metrics […] Appendix B	→ Sector-specific standards, ESRS 4 DR2	
(c) [Targets §15 • §15 (a): objective; §15 (b): absolute or intensity; §15 (c) science-based and external party validation • §15 (d): sectoral decarbonisation approach, §15 (e) timeframe	→ ESRS E1 DR8 (Targets) → ESRS E1 DR8 §41 (a), (h), (e) . → ESRS E1 DR8 (d) and AG	

WORKING PA

• §15 (f): base year; §15 (g): milestones; §15 (h): metrics to assess progress]	→ ESRS E1 DR8 (c), (g) and AG	
(d) [other key performance indicators used by the board or management to measure progress towards the targets]	→ Entity-specific layer, ESRS 4 DR3	

WORKING PAPER