Basis for conclusions accompanying the '*Climate standard prototype' working paper* presented by Cluster 2 to the EFRAG Project Task Force on European sustainability reporting standards (PTF-ESRS)

Cover note and disclaimer

1 The PTF-ESRS made publicly available a working paper on a '*Climate standard prototype*' on 8 September 2021. The following Basis for conclusions is now being made publicly available in order to give more information and elaborate on the considerations of Cluster 2 relating to the disclosure proposals presented in the working paper. It should therefore be read in conjunction with the working paper released on 8 September 2021.

2 This Basis for conclusions follows the same process as the working paper. It is not open to public consultation at this stage and is disclosed for transparency purposes as a milestone so that stakeholders have an understanding on the operations, initial thinking and direction taken on the *Climate standard prototype*.

3 The *Basis for conclusions* explains the rationale behind the proposed disclosure requirements. It will accompany but will not be part of the future climate standard. It summarises the considerations of Cluster 2 in developing the proposed content of the future climate standard. It also aims at justifying the options taken for the disclosure requirements and the proposed references (e.g. GHG Protocol) by laying out the rationale. More specifically, it describes why disclosures should be required (objective and scope of the standard, background, references to the main EU and international frameworks and a focus on users' needs), what should be disclosed and how it should be disclosed.

General context

4 Under Article 19b(1) of the European Commission's proposal for a Corporate Sustainability Reporting Directive (CSRD), EFRAG should be mandated by the European Commission to develop draft EU sustainability reporting standards.

5 Following EFRAG's two reports published on 8 March 2021, the European Commission, in a letter dated 12 May 2021, has requested EFRAG to put in place **interim working methods** to start the technical work immediately before it is handed over to EFRAG standard setting bodies under a new governance structure.

6 The plenary kick-off meeting of the PTF-ESRS on 9 June 2021 established the organisation of the project in **9 clusters**, reflecting the target architecture proposed in the PTF-NFRS report.

7 Cluster 2 is responsible for preparing a draft **climate standard** covering climate change mitigation and climate change adaptation (including energy).

8 This working paper titled '*Climate standard prototype*' and its accompanying Basis for conclusions hereafter lay the grounds for a draft climate standard and should not be interpreted in any way whatsoever as representing the views from the European Commission.

Status of the *Climate standard prototype* working paper, accompanying basis for conclusion and due process to date

9 The *Climate standard prototype* is a **working paper prepared by Cluster 2**. It was presented to the PTF-ESRS on 8 September 2021 to initiate further discussions and exchanges of views within the wider PTF-ESRS.

10 The approach followed by Cluster 2 was split into two phases. **The first phase, now completed, involved analysing the comprehensive state of play** of EU and international legislations (SFDR, Taxonomy, etc.) and policies as well as climate-related reporting frameworks (in particular TCFD) and standards. The starting point was the work carried out by the multi-stakeholder Project Task Force on preparatory work for the elaboration of possible EU non-financial reporting standards (PTF-NFRS). **In a second phase**, Cluster 2 has started testing the characteristics of information quality, assessing materiality from the impact and/or financial perspectives, designing content, drilling down datapoints and considering connectivity with financial reporting to get **a content prototype.** However, since the work of all clusters, and in particular those dealing with conceptual guidelines and cross-cutting standards, is still in progress, this second step will need to be re-visited in due time.

11 **It should also be noted that this first proposal focuses on non-financial undertakings at this stage.**

Due process going forward

12 **The document is shared as a working paper reflecting the views and consensus at this point in time within Cluster 2 only. Therefore, it does not reflect the position of the PTF-ESRS which has yet to be debated.**

13 **Significant changes may happen as internal discussions are still ongoing within the responsible cluster. Significant changes could also arise from the subsequent steps of the due process** described below at PTF-ESRS level – the working paper and basis for conclusion were not endorsed by the PTF-ESRS – and after handing over to the EFRAG governing bodies.

14 **As of today, the planned next steps within the PTF-ESRS are the following:**

(a) submission to the PTF-ESRS review panel,

(b) submission to all PTF-ESRS members for comments,

(c) consensus building discussions in plenary meeting(s),

(d) onboarding of suggestions and preliminary decisions in a V0 draft standard,

(e) submission to a dedicated expert working group (see call for candidates).

15 Further steps, in particular public consultation, will be considered in due course at a more advanced stage in accordance with the outcome of the consultation on the EFRAG due process.

16 The PTF-ESRS does not expect to receive any comment on the Appendix at this stage.

Additional disclaimers to be borne in mind when reading the basis for conclusion hereafter

17 *Boundaries.*

(a) There may be overlaps between topical standards requirements and cross-cutting disclosure requirements. In particular, the PTF-ESRS still needs to agree on what disclosure requirements should be included in cross-cutting standards and reporting areas standards or arise from conceptual guidelines and what disclosure requirements should be specific to a topical standard.

(b) Other overlaps may relate to boundaries between sector-agnostic disclosure requirements and sector-specific disclosure requirements.

18 *Prioritisation.* The prioritisation of subtopics and the sequence between (i) a first set of standards at least specifying information corresponding to the needs of financial market participants to be delivered in 2022, and (ii) a second set of standards with complementary information to be delivered in 2023, will be key and require arbitration.

19 *Financial connectivity.* The connectivity between financial reporting and sustainability reporting is still to be further considered and developed at PTF-ESRS level, along with the principles to follow in terms of scope, segment / activity information, etc.

20 *Digitisation.* The elaboration of the application guidance on digitisation (an appendix to the standard) could also have an impact on the detailed formulation of disclosure requirements.

21 *How to disclose.* This section has not been finalised at this stage.

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Basis for conclusions
ESRS1 – Climate Standard accompanying material

This draft Basis for Conclusions accompanies the "Climate Standard Prototype" working paper. It gathers the considerations of Cluster 2 relating to the disclosure proposals summarised in the working paper and elaborates on them.

Objective

BC1. Based on the relevant provision from CSRD-proposal, other EU legislation and the mandate and approach of the EFRAG PTF-ESRS, Cluster 2 considers that the objective of the Climate Standard should be to ensure that stakeholders [Alternative: investors and other stakeholders] of the reporting entity obtain information that enables them to understand:

- the impact of the reporting entity 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;
- the nature, type and extent of the risks and opportunities which arise from the climate change to which the reporting entity is exposed;
- the effects of climate-related risks and opportunities on the reporting entity's financial position, financial performance and ability to create enterprise value over the short-, medium- and long-term; and
- the plans and capacity of the reporting entity to adapt its business model and operations in line with the transition to a sustainable economy and limiting global warming to 1.5°C.

Scope

BC2. The "Climate standard prototype" working paper and this document cover disclosure proposals applicable to non-financial reporting entities.

BC3. The "Climate standard prototype" working paper and this document cover disclosure proposals related to the subtopics climate change mitigation, energy and climate change adaptation.

BC4. The subtopic "Climate change mitigation" includes the seven Greenhouse Gases listed in the Kyoto Protocol: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3). Including other impacts on climate change (e.g. from land use changes, black carbon, tropospheric ozone etc.) is discussed in this document.

BC5. The subtopic "Energy" covers all types of energy production and consumption.

BC6. The subtopic "Climate change adaptation" refers to climate-related hazards that can lead to physical climate risks of an undertaking and adaptation solutions that can reduce these risks.

BC7. Cluster 2 highlights that at a later stage cross-references to other environmental and social content standards need to be included, as GHG emissions as well as energy related emissions in terms of pollution and health issues are expected to be covered by these standards. In particular, ozone-depleting substances (ODS), nitrogen oxides (NOX) and sulphur oxides (SOX), among other significant air emissions are connected to climate change mitigation and should be discussed in line with potential reporting requirements on pollution and health.

BC8. Cluster 2 stresses that the "Climate Standard Prototype" working paper and this Basis for Conclusions could not yet take into account the cross-cutting standards currently under development by Cluster 1 but considers an alignment with these absolutely crucial to achieve consistency and clarity. Consequently, proposals made in the working paper and

this document will likely be subject to (significant) changes based on the content of the cross-cutting standards.

BC9. To complete the reporting areas, the "Performance Measures" section is developed at climate subtopic level only.

Additional Climate Disclosure on Strategy

Business Strategy and Climate

BC10. This section contains proposals from Cluster 2 for disclosures on the effects of climate-related risks and opportunities on the business model and strategy, the resilience of the business model and strategy and how the business model and strategy drive actual and potential impacts of the undertaking on the climate. The aim is to establish 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.

BC11. Cluster 2 notes that this document only contains proposals for additional climate-related disclosures on business model and strategy. A cross-cutting content standard on business model and strategy is currently under development by Cluster 1. Cluster 2 stresses that an alignment with the cross-cutting standard is still pending but absolutely crucial to achieve consistency and clarity. Consequently, proposals made in this document will likely be subject to (significant) changes based on the content of the cross-cutting standard.

Why disclosing on Business strategy and Climate?

EU legislation and recommendations

BC12. The Non-Financial Reporting Directive1 ('NFRD') requires that undertakings disclose information about their business strategy and the resilience of the business model and strategy to risks related to sustainability matters.

BC13. In the European Commission's proposal for a Corporate Sustainability Reporting Directive2 ('CSRD'), Article 19a (2) asks undertakings to report on the business model and strategy, including:

i. "the resilience of the undertaking's business model and strategy to risks related to sustainability matters";

ii. "the opportunities for the undertaking related to sustainability matters";

iii. "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";

iv. "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";

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

[1] 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.

[2] 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.

BC14. The European Commission's Guidelines on reporting climate-related information[3] 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.

BC15. 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".

BC16. The Guidelines finally provide "further guidance" by recommending the disclosure of:

- 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,
- 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,
- 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,
- 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.

BC17. The EU Taxonomy Regulation[4] 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 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

BC18. The CDP, Climate Disclosure Standards Board ('CDSB'), Global Reporting Initiative ('GRI'), Integrated Reporting ('IR') Framework and Sustainability Accounting Standards Board ('SASB') published a Prototype of a Climate-Related Financial Disclosure Standard[5] in December 2020. As stated in the paper, the objective of the proposed disclosure requirement on Strategy, Business Model and Outlook is to "enable the primary users of information to understand the way in which the implications of climate-related risks and opportunities are integrated into the entity's strategy and implications for the entity's business model, including how resources are to be used to support strategic resilience to climate-related risks and to realise climate-related opportunities". Consequently, the prototype paper suggests to disclose:

- climate-related risks and opportunities that enhance, threaten or may change the entity's business model and strategy over the short-, medium- and long-term;
- impact of identified climate-related risks and opportunities on the entity's business model and strategy;

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

[4] 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.

[5] CDP, CDSB, GRI, IR and SASB, "Reporting on enterprise value Illustrated with a prototype climate-related financial disclosure standard", December 2020.Available here.

- whether and how climate-related risks and opportunities and the associated impacts serve as an input to the entity's decision-making, strategy formulation and financial planning process, including decisions and plans;
- whether and how the resilience of the entity's strategy and business model may be affected by climate-related risks and opportunities.

BC19. The proposed disclosures are further detailed in the paper. Notably, the proposals refer to short-, medium- and long-term time horizon and the consideration of the supply and value chains.

BC20. The CDSB Framework[6] 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.

BC21. The SASB Standards[7] 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 long-term. Each industry specific SASB Standard includes climate-related risks and opportunities that are likely to be material in a given industry.

BC22. The IR Framework[8] 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.

BC23. The Task Force on Climate-Related Financial 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)).

BC24. In a current consultation paper[9] on proposed guidance on climate-related metrics, targets, and transition plans, the TCFD gives further (preliminary) guidance on disclosure of (1) Climate-related transition plans, (2) Principles for disclosing transition plans, and (3) Communicating and disclosing transition aspects of strategy under the TCFD recommendations.

BC25. As part of the GRI Universal Standards (currently under revision), GRI 102[10] asks for a disclosure of a Statement on sustainable development strategy.

BC26. The CDP climate change questionnaire[11] asks companies in Section C3 to explain how climate-related risks and opportunities influenced the company's strategy and/or financial

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

[7] SASB Standards. Available here.

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

[9] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

[10] GRI, "GRI Universal Standards: GRI 101, GRI 102, and GRI 103 – Exposure draft", June 2020. Available here.

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

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.

Users' needs

BC27. Cluster 2 shares the analysis of the TCFD 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.[12]

BC28. Recital 41 of the CSRD proposal 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".

BC29. Cluster 2 considers that civil society organisations, governmental bodies, consumers, workers and people affected by the consequences of climate change, among others, are increasingly interested to 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

BC30. 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, Cluster 2 considers it important that undertakings create transparency on how climate-related risks and opportunities can affect their business models and strategies, how resilient the current business model of an undertaking is towards climate-related risks (financial materiality perspective) and how it causes and drives GHG emissions and other adverse or positive impacts on climate change (impact materiality perspective). In addition, undertakings should report on the transition plans they have in place.

BC31. Cluster 2 notes that some sectors, notably those with high direct GHG emissions, face higher challenges related to the transition to a climate-neutral economy than others. Cluster 2 also notes that the materialisation of physical climate risks greatly differs among entities depending, among others, on the type of their activities and business relationships and the location of their assets. Despite entity-specific differences, Cluster 2 concludes that 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 threats of climate change and to develop plans of how to be part of the transition ahead and should make transparent where they stand in these regards.

BC32. Cluster 2 stresses that 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.

BC33. To appropriately incorporate the potential effects of climate change in their strategic decision making, companies should consider how climate-related risks and opportunities may evolve over time and what their potential business implications are under different conditions. For this purpose, Cluster 2 observes that climate-related scenario analysis is a highly useful approach but at the same time acknowledges, that for many undertakings it is a new concept that brings along methodological and operational challenges. Cluster 2

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

concludes that all undertakings should report how business model resilience has been assessed and if a range of climate scenarios was used to inform the assessment. If so, undertakings should explain scenarios, assumptions and modelling parameters used.

BC34. In case of a company pursuing several business models, the reporting entity should particularly highlight its business models generating impacts on climate and/or being affected by climate change.

BC35. Cluster 2 observes that notably the TCFD and CDP, among other reporting frameworks, have led to an improvement climate-related reporting on strategy and business model.

What to disclose?

BC36. Cluster 2 proposes three climate-related disclosure requirements that aim to allow an understanding of how the undertaking considers climate-related impacts, risks and opportunities in defining and adjusting its overall strategic direction:

i. The effects of climate change on the business model and strategy
ii. The resilience of the business model and strategy towards climate related risks
iii. The actual and potential impacts of the business model and strategy on the climate change

These key disclosures are underpinned by up to ten specific datapoints.

Rationale: The three key disclosures are intended to cover the respective requirements in Article 19a (2) lit. (a) CSRD-proposal and are based to the extent possible on existing reporting requirements and recommendations, notably from the TCFD. The third disclosure was added to reflect the impact materiality perspective.

BC37. Regarding item 1 the following data points are proposed:

- Describe the actual and potential effects of climate-related risks and opportunities on the business model and strategy, including reference to products and services, operations and value chains. (Narrative)
- Describe where in the value chain climate-related risks are concentrated, including an identification of key resources and processes of the undertaking these risks relate to. (Multiple Choice + Narrative)
- Describe how climate-related risks and opportunities serve as an input to management's strategy and decision making. (Narrative)

Rationale: Disclosure item 1 is supported by three narrative data points with the first and the third being based on Strategy recommended disclosure b) of the TCFD recommendations and the second originating from a proposal in the Prototype paper of CDP, CDSB, GRI, IR and SASB. Climate-related risks and opportunities refer to all principal short-, medium- and long-term climate-related risks and opportunities identified under section "Climate Impacts, Risks and Opportunities", detailed by transition and physical risks. The second data point is deemed meaningful to provide users with an overview where in an undertaking's value chain most of the identified transition and physical risks are located. Cluster 2 considers that by providing information on the risk concentration, an undertaking should establish a link to key resources it uses (e.g. specific raw materials or production factors). It might be useful to also include an undertaking's dependencies on natural capital (such as water, land, ecosystems or biodiversity) that are or will be impacted by climate change in this description. However, Cluster 2 sees the need for more discussions on how to appropriately account for the concept of "dependencies" in reporting on the effects of climate-related risks on the business model but also in reporting on risk assessment processes (addressed in the next section).

BC38. Regarding item 2 the following data points are proposed:

- Describe the resilience of the current business model(s) and strategy to climate-related risks. (Narrative)
- Has the resilience of the business model(s) been verified by using a range of climate
- scenarios, including a 2°C and 1.5°C scenario for transition risks and >2°C scenarios for physical risks? (yes/no)

- If yes, describe the scenarios that have been considered, why they were chosen, key assumptions taken and the time horizon over which the analysis has been conducted. (Narrative)
- Describe the short-, medium- and long-term strategic implications resulting from the analysis. (Narrative)
- Share of turnover from Taxonomy-aligned activities in comparison to Taxonomy-eligible activities and provide an estimate of this ratio in 5 years. The disclosure is made as percentage (%) of annual turnover.

Rationale: 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.[13] When describing the resilience of the business model towards climate-related risks, an undertaking should therefore reflect on how the materialization of its principal transition and physical risks could affect the way it creates value and the mechanisms with which the business model can absorb or recover from these effects.

Cluster 2 considers that 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. Even though, Cluster 2 acknowledges that there are still methodological and operational challenges in climate-related scenario analysis and therefore proposes that undertakings report if they verified the resilience by using a range of climate scenarios and if so provide more details on the underlying assumptions. To ensure relevant outcomes, Cluster 2 stresses that climate scenarios used for transition risks should include at least a 2°C and a 1.5°C scenario, if available on a sector specific basis (see section on "Climate targets" for more information), and for physical risks a >2°C scenarios. An undertaking should subsequently describe the strategic implications it draws from this analysis in the short-, medium- and long-term.

The last data point proposed under this disclosure relates to the share of turnover from (Climate mitigation) Taxonomy-aligned activities in comparison to Taxonomy-eligible activities. Given the intention of the EU Taxonomy on climate mitigation to classify economic activities as substantially contributing to climate change mitigation if they fulfil certain Technical Screening Criteria, Do No Significant Harm to other environmental objectives and meet minimum Social Safeguards, Cluster 2 considers that this ratio can be a meaningful indicator for an undertaking's progress in the transition to a low-carbon resilient business model. Because of the forward-looking character, it is suggested to not only report on the ratio in the reporting year but also to provide an estimation of that ratio in 5 years. The 5-year time span correlates with the requirement for disclosing a CapEx plan under the Delegated Act supporting Article 8 of the EU Taxonomy Regulation. Hence, information on the extent of taxonomy-aligned activities in the future should be available, However, Cluster 2 acknowledges that estimating the future turnover from these activities will require the undertaking to make assumptions on market developments.

BC39. Regarding item 3 the following data points are proposed:

- Describe how the current business model and strategy cause and drive GHG-emissions and other climate-related impacts in own operations and along the value chain. (Narrative)
- Describe the plans to ensure that the business model and strategy are compatible with the transition to limiting of global warming to 1.5 °C in line with the Paris Agreement (i.e. transition plan).

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

Rationale: This disclosure addresses the impacts of an undertaking's business model and strategy on climate change. Cluster 2 considers that in addition to the disclosures on how transition and physical risks can affect an undertaking, stakeholders need to understand the mechanisms of how its current business model and strategy cause and drive GHG emissions and other climate-related impacts. A second narrative data point is proposed to describe the undertaking's transition plan towards a low-carbon or net-zero business model. Cluster 2 is aware that a transition plan is essentially a cross-cutting instrument that contains policies, targets and actions and therefore suggests a high-level description under this data point that references the sections "Policies and Targets", and Actions & Resources". Section "Climate Policies and Targets" of this document contains more information on transition plans. Despite the need for reporting on transition plans, Cluster 2 deems further discussion on how this concept can be fitted into the overall ESRS-structure necessary.

How to disclose?

[To be developed]

Climate Impacts, Risks & Opportunities

BC40. This section contains proposals from Cluster 2 for disclosures on the impacts on climate change as well as climate-related risks and opportunities, covering own operations and the value chain. The aim is to establish transparency for investors and other stakeholders on how the undertaking identifies and assesses impacts on climate change (as part of the due diligence process) and climate-related risks and opportunities, what the principal impacts on climate change and climate-related risks and opportunities are, and how it integrates them in the overall risk management and management system. Information on the financial effects of a "Climate Impacts, Risks and Opportunities" is provided in the "Financial Exposure to Transition and Physical Risks; Financial Opportunities" of this working paper. The disclosures proposed in this section are also considered as a necessary foundation for reporting on business strategy (see previous section).

BC41. Cluster 2 notes that this document only contains proposals for additional climate-related disclosures on climate impacts, risks and opportunities. A cross-cutting content standard on impacts, risks and opportunities is currently under development by Cluster 1. Cluster 2 stresses that an alignment with the cross-cutting standard is still pending but absolutely crucial to achieve consistency and clarity. Consequently, proposals made in this document will likely be subject to (significant) changes based on the content of the cross-cutting standard.

Why disclosing Impacts on Climate Change and Climate-related Risks and Opportunities?

EU legislation and recommendations

BC42. Article 19a (1) of the CSRD-proposal14 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) CSRD-proposal 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) CSRD-proposal requires "a

[14] 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.

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[15]).

BC43. 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.

BC44. Based on the recommendations of the TCFD, the European Commission's Guidelines on reporting climate-related information[16] 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", the "processes for managing climate-related risks" as well as "how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management".

BC45. Annex IV of Regulation (EC) No. 1221/2009 (Eco-Management and Audit Scheme - EMAS) [17] 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."

BC46. The EU Taxonomy[18] 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.

BC47. Articles 4 and 6 of the Sustainable Finance Disclosure Regulation ('SFDR')[19] 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.

BC48. The European Commission's Guidelines on reporting climate-related information[20] recommend to describe "the company's processes for identifying and assessing climate-related risks over the short, medium, and long term", the "processes for managing climate-related risks (if applicable how they make decisions to mitigate, transfer, accept, or control those risks)" 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.

BC49. 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".

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[15] 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.

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

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

[18] Annex to the Commission Delegated Regulation (EU) .../... supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives. Available here.

[19] 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.

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

Global reporting frameworks

BC50. 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.

BC51. 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[21], asks information on climate-related impacts, risks and opportunities.

BC52. The CDP, CDSB, GRI, IR and SASB' Prototype of a Climate-Related Financial Disclosure Standard[22] proposes a disclosure requirement on risk management with the objective to "enable the primary users to understand how climate-related risks are identified, assessed and managed and what risk management process is used". Consequently, the prototype paper suggests to explain:

- the risk management process and strategy for each category of climate-related risk that the undertaking identifies; and
- the risk management related to climate risk and opportunities alongside other risk management disclosures in enterprise value reporting.

The proposed disclosures are further detailed in the paper.

BC53. The CDSB Framework[23] recommends undertakings to explain in their disclosures the material current and anticipated environmental risks and opportunities affecting the organisation.

BC54. The SASB Standards[24] 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.

BC55. The IR Framework[25] 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.

BC56. TCFD[26] 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

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

[22] CDP, CDSB, GRI, IR and SASB, "Reporting on enterprise value Illustrated with a prototype climate-related financial disclosure standard", December 2020. Available here.

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

[24] SASB Standards. Available here.

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

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

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)).

BC57. In its 2020 exposure draft of the Universal Standards[27] GRI suggests the disclosure of the "effectiveness of risk management processes" (Disclosure 102-30).

BC58. GRI 201[28] 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".

BC59. GRI 305[29] 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.

BC60. The CDP climate change 2021 questionnaire[30] requires information on "management processes" of risks and opportunities, including: if the organisation has a process for 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.

BC61. 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

BC62. Sustainability disclosures should be designed to cover the needs of a variety of stakeholders.

BC63. In the CSRD-proposal[31] 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

[27] GRI, "GRI Universal Standards: GRI 101, GRI 102, and GRI 103 – Exposure draft", June 2020. Available here.

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

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

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

[31] 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.

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)

BC64. Regarding climate-related information, Recital 41 of the CSRD-proposal 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."

BC65. Cluster 2 considers that 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 company'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 can not be transformed in line with increasing regulatory or demand side focus on climate impact (stranded assets). And the company may face the risk of severe reputational damage if the company or it's suppliers become the target of critique because of the way in which climate impact is taken into consideration. Companies may also find themselves in a situation where they can gain competitive advantages of climate change, eg. 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 climate impact represents is of increasing strategic importance for undertakings' financial performance – both over the medium and longer term - and therefore to investors.

BC66. 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 investments decisions, and regarding investment products' climate change and sustainability performance. The Capital Requirements Regulation ('CRR')[32] 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

BC67. Due to their activities and business relationships currently most if not all undertakings contribute – to varying extents – to global climate change. In addition, 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.

BC68. Cluster 2 sees 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,

[32] 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.

is exposed to climate-related transition and physical risks and identifies opportunities, including the value chain. To achieve such a comprehensive understanding, Cluster 2 sees the 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.

BC69. With the European Commission's Guidelines on reporting climate-related information and the global reporting frameworks, notably the recommendations of the TCFD, Cluster 2 observes that generally accepted reporting approaches for this information already exist and suggests to rely on these.

BC70. In summary, Cluster 2 considers reporting on the impacts on climate change as well as climate-related risks and opportunities, covering own operations and the whole value chain, material for all undertakings.

BC71. Cluster 2 notes that 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. Information on the management of adverse impacts on climate change are further underpinned in sections "Climate Governance" and "Climate Policy". Actions to mitigate these adverse impacts are addressed in section "Climate Targets" and "Actions & Resources".

BC72. Cluster 2 notes that 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 "Performance Measurement".

What to disclose?

BC73. Cluster 2 considers that investors and other stakeholders should be able to gain a comprehensive and robust understanding of an undertaking's impacts on climate change and climate-related risks and opportunities and for this purpose proposes the following key disclosures:

i. Identification and assessment processes of the undertaking for impacts on climate change and climate-related risks and opportunities

ii. Description of principal impacts on climate change and climate-related risks and opportunities

iii. Integration of impacts on climate change and climate-related risks and opportunities into the management processes.

Rationale: *The proposed disclosures follow a logical order that aim to provide transparency on the approach an undertaking takes to identify the impacts, risks and opportunities it needs to manage. Hence, the first disclosure relates to the identification and assessment processes, the second on the outcome of the assessment, i.e. the principal impacts, risks and opportunities, and the third on how these are considered in the overall risk management, management system and strategy definition of the undertaking*.

BC74. Regarding item 1, the following data points are proposed:

- Describe the processes for identifying and assessing the adverse and positive impacts on climate change along the value chain. (Narrative)
- Describe the processes for identifying and assessing short-, medium- and long-term transition risks and opportunities along the value chain, including a definition of the considered time horizons, scenario analysis, how size and scale of the risks and opportunities are assessed and how principal transition risks and opportunities are selected. (Narrative)
- Describe the processes for identifying and assessing short-, medium- and long-term physical risks along the value chain, including a definition of the considered time horizons, scenario analysis, how size and scale of the hazards are assessed and associated principal risks are selected. (Narrative)

Rationale: Disclosure item 1 is supported by three narrative data points that capture the double materiality concept and, regarding climate-related risks and opportunities, rely on existing disclosures from the TCFD recommendations (risk management recommended disclosure a)) and the CDP climate change questionnaire (section C2). Cluster 2 considers it important that reporting entities 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 processes will increase the reliability of the disclosed principal impacts, risks and opportunities (see next BC). Cluster 2 further observes that climate-related impacts, risks and opportunities for most sectors do not only occur in an undertaking's own operations, but also in the supply and value chains. For this reason, it is suggested that an undertaking should provide transparency to which degree the identification and assessment processes include value chain considerations.

Cluster 2 notes that 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 for describing 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 proposed calculation 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 if and how it considers additional impacts on climate change (e.g. emission of certain short-lived climate forcers or land use changes). Cluster 2 stresses in this regard, that 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.

Climate-related risks and opportunities and the respective identification and assessment processes should, in line with TCFD and the CSRD-proposal, be reported over the short-, medium- and long-term to provide stakeholders with a comprehensive picture. Cluster 2 suggests 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. The undertaking should report on the time horizons it considers, if and how the identification and assessment relies on a range of climate scenarios and how the size and scale of a risk or opportunity is assessed. Cluster 2 suggests to also describe in these data points how principal risks and opportunities are selected. Cross-references to the reporting on business model resilience and climate targets are recommended to ensure consistency.

BC75. Regarding item 2, the following data points are proposed:

- Describe the principal transition risks. (Narrative)
- Describe the principal physical risks. (Narrative)
- Describe the opportunities over the short-, medium and long-term with the potential to have a substantive financial or strategic effect for the undertaking. (Narrative)
- Does the undertaking have significant impacts beyond GHG-emissions* in its value chain (including own operations)? (Yes/No)
- If yes, describe significant non-GHG-related impacts on climate change. (Narrative)

Rationale: Based on the outcome of the identification and assessment processes undertakings should disclose what their principal climate-related risks, opportunities and impacts are. The proposed data points are based on TCFD strategy recommended disclosure a) and section C2 of the CDP climate change questionnaire and subdivided by transition risks, physical risks, and opportunities. Cluster 2 notes that the financial effects

of the principal climate-related risks and opportunities are addressed under performance measurement – financial exposure to transition and physical risks; opportunities. Regarding the impacts on climate change, undertakings should in this section only describe significant/impacts that are not already covered by the performance indicators on GHG-emissions. Cluster 2 deems that this is a useful data point to capture impacts on climate-change that result from short-lived climate forcers or land use changes, which can be significant but are not fully captured under conventional corporate carbon footprint methodologies.

BC76. Regarding item 3, the following data points are proposed:

- Describe the processes for validating the assessment output of the impacts on climate change as well as climate-risks and opportunities. (Narrative)
- Describe how processes for identifying, assessing and managing impacts on climate change and climate-related risks and opportunities are integrated into the overall risk management, management system and strategy definition. (Narrative)

Rationale: Disclosure item 3 aims to establish transparency if the processes for identification, assessment and management of climate-related impacts, risks and opportunities are integrated into the overall risk management and management system. Cluster 2 deems this to be important information for stakeholders to gain insights if the undertaking considers climate-related impacts, risks and opportunities as drivers for strategic and day-to-day decision making in the undertaking, i.e. as part of its core business activity or an isolated task performed in parallel to the overall management system. The second narrative data point is based on TCFD risk management recommended disclosure c) but extends it by also referring to impacts on climate change (impact materiality) and opportunities. Consequently, the disclosure proposal does not limit the description to the integration in overall risk management but also in the overall management system of the undertaking and its strategy definition. Concerning the latter, Cluster 2 recommends a cross-reference to the proposed disclosure under business strategy and business model (see BC 37 above).

How to disclose?

[To be developed]

Climate Governance

BC77. This section contains proposals from Cluster 2 for disclosures on the governance of impacts on climate change and climate-related risks and opportunities as well as internal climate-related incentive mechanisms applied by an undertaking. The aim is to establish transparency for investors and other stakeholders on how the undertaking establishes the climate-related governance structures and mechanisms both at board level and at management and operations levels, how it organises remuneration incentives on GHG emissions reduction and implements internal carbon pricing tools.

BC78. Cluster 2 notes that this document only contains proposals for additional climate-related disclosures on climate governance. A cross-cutting content standard on governance is currently under development by Cluster 1. Cluster 2 stresses that an alignment with the cross-cutting standard is still pending but absolutely crucial to achieve consistency and clarity. Consequently, proposals made in this document will likely be subject to (significant) changes based on the content of the cross-cutting standard.

Why disclosing on Climate Governance?

EU legislation and recommendations

BC79. Article 19a lit. (e) of the CSRD-proposal[33] requires entities to disclose "a description of the role of the administrative, management and supervisory bodies with regards to sustainability factors".

BC80. Annex IV of the EMAS Regulation[34] states that the environmental statement shall contain "a brief description of the governance structure supporting the environmental management system of the organisation".

BC81. The European Commission's Guidelines on reporting climate-related information[35] 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.

Global reporting frameworks

BC82. The common Prototype of a Climate-Related Financial Disclosure Standard[36] developed by the CDP, CDSB, GRI, IR and SASB proposes a disclosure requirement on Governance with the objective to "enable the primary users to understand the governance processes, controls and procedures used for managing climate-related risks and opportunities". More specifically, the common prototype details that such disclosures should cover:

- "a description of the board's oversight of climate-related risks and climate-related opportunities;
- a description of management's role in assessing and managing climate-related risks and opportunities;
- the identity of the board member, senior executive or committee responsible for climate-related risks and opportunities;
- board skills and competencies to govern and manage strategies designed to respond to climate-related risks and opportunities; and
- a description of how the board holds management accountable for the implementation of climate-related policies, strategies and targets, including whether and how related performance metrics are incorporated into remuneration policies".

[33] 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.

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

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

[36] CDP, CDSB, GRI, IR and SASB, "Reporting on enterprise value Illustrated with a prototype climate-related financial disclosure standard", December 2020. Available here.

BC83. The CDSB Framework37 recommends undertakings to describe the governance of environmental policies, strategy and information.

BC84. The SASB Standards38 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.

BC85. The IR Framework39 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.

BC86. 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" 40. 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)).

BC87. According to TCFD 2021 consultation paper41 on proposed guidance on climate-related metrics, targets, and transition plans, TCFD argues that "companies should disclose the amount of senior management remuneration impacted by climate considerations. Remuneration policies are important incentives for achieving an organization's goals and objectives and signal governance, oversight, and accountability for managing climate-related issues. The ways in which organizations link executive compensation to climate-related performance will be specific to their company and governance structure. 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."

BC88. GRI 102 (2016)42 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 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).

BC89. The CDP43 points out four governance topics in relation to climate change: board oversight, management responsibility, employee incentives and retirement schemes. Firstly, CDP recommends reporting entities 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 reporting entities to provide the highest-level management position(s) or committee(s) with responsibility for climate-related issues and explicit where such

[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 Disclosure", 2017, p.19. Available here.

[41] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

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

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

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.

Users' needs

BC90. TCFD highlights that "investors, lenders, insurance underwriters, and other users of climate-related financial disclosures are interested in understanding the role an organization's board plays in overseeing climate-related risks and opportunities, as well as management's role in assessing and managing those issues".[44]

BC91. Cluster 2 considers that also other stakeholders want to understand the maturity of the undertaking for assessing and managing climate-related impacts, risks and opportunities and is of the opinion that information on governance structures, oversight processes at board and management level, responsibilities and competencies is meaningful information in this regard.

BC92. TCFD argues that "remuneration policies are important incentives for achieving an organization's goals and objectives and signal governance, oversight, and accountability for managing climate-related issues".[45]

Conclusions

BC93. Given the interest of stakeholders in understanding the governance of climate change in companies and the role played by the board in monitoring climate-related issues, Cluster 2 considers that additional climate-related governance disclosure are meaningful.

BC94. Based on the above, the disclosure of climate governance should cover the following topics: board oversight of climate-related issues, management responsibility as well as organisation's structure for climate-related issues, and climate-related metrics incorporated into remuneration policies.

BC95. Since the cross-cutting standard "Governance" requires all the topics previously mentioned, disclosure of climate governance should address arrangements related to climate risk and opportunities alongside other governance disclosures.

What to disclose?

BC96. Cluster 2 considers that investors and other stakeholders should be able to gain a comprehensive and robust understanding of an undertaking's governance of impacts on climate change and climate-related risks and opportunities and for this purpose proposes the following key disclosures:

i. Description of governance arrangements related to impacts on climate change and climate-related risks and opportunities at board level

ii. Description of governance arrangements related to impacts on climate change and climate-related risks and opportunities at management and operations levels

iii. Identification of internal climate-related incentive mechanisms.

Rationale: *The proposed disclosures follow a logical order that aims to provide transparency on the governance structure that an undertaking has implemented to manage its impacts on climate change as well as climate-related risks and opportunities. Hence, the first disclosure*

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

[45] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021, p. 24. Available here.

tackles the organisation at board level while the second one refers to management and operation levels. The third key disclosure relates to the internal climate-related incentive mechanisms, covering both remuneration and internal carbon pricing systems[46]*.*

BC97. Regarding item 1, undertakings should disclose governance arrangements related to impacts on climate change and climate-related risks and opportunities at board level. This disclosure should include the following data points:

- Whether there is formal board level oversight of climate-related issues;
- A description and/or a graphical representation of the governance structure and committees at board level responsible for climate-related issues, including processes for delegating authority from board level to management and operation levels;
- A description of the competencies of board members relating to climate change;
- A description of the board oversight process covering climate-related decision, including at least:
    - Strategic or plans review,
    - When and how a climate related issue is raised to board attention,
    - Performance/target monitoring, and
    - CapEx/M&A decisions.
- The number of climate-related decisions taken by the Board in the reporting year as shown in the minutes of the Board meetings.

Rationale: *Disclosure item 1 is supported by four narrative data points that capture the structure, competencies and scope of the governance at board level. These data points rely on existing disclosures in the TCFD recommendations, the CDP climate change questionnaire and the common prototype developed by the CDP, CDSB, GRI, IR and SASB. In line with TCFD, Cluster 2 considers it important that undertakings disclose governance arrangements at board level related to impacts on climate change and climate risk and opportunities alongside other governance disclosures, using cross-references as need be, as long as adaptations to governance processes to cater for the unique characteristics of climate-related risks are clearly explained. The disclosure item 1 is completed by a quantitative data point which relates to the number of climate-related decisions taken by the Board in the reporting year. Cluster 2 welcomes a discussion on the meaningfulness of this data point. On the one hand it may be argued that such an indicator is incapable to measure the effects of the decisions made and in a worst case may lead to malpractice (e.g. splitting decisions in sub-decision to increase their amount). On the other hand, it may be considered suitable to indicate the importance climate-related issues have at the board level.*

BC98. Regarding item 2, undertakings should disclose governance arrangements related to impacts on climate change and climate-related risks and opportunities at management and operations levels. This disclosure should include the following data points:

- Whether the undertaking assigns climate-related responsibilities and authorities to senior executive positions or committees;
- A description and/or a graphical representation of the associated organisational structure(s) and reporting lines;
- A description of the role of management and operations levels relating to, *e.g.*:
    - Business model and strategy,
    - Climate mitigation or adaptation policies,
    - Assessment and/or management of impacts, risks and opportunities, and
    - Emissions reduction targets.

[46] Note: In the “Climate Standard Prototype” working paper, internal carbon pricing is presented as a part of Climate governance / internal climate-related incentives mechanisms. In this document carbon pricing is discussed in a separate section below under “Climate performance measures”.

- A description of the competencies of the senior executives regarding climate change; and
- A description of the engagement with stakeholders regarding impacts on climate change and climate-related risks and opportunities, including engagement with upstream and downstream partners to promote climate mitigation and/or adaptation solutions.

Rationale: *Disclosure item 2 is supported by five narrative data points that capture the structure, competencies and scope of the governance at management and operations level, as well as the engagement with stakeholders regarding impacts on climate change and climate-related risks and opportunities. These data points rely on disclosures in the TCFD proposed guidance on climate-related metrics, the CDP climate change questionnaire, the common prototype developed by the CDP, CDSB, GRI, IR and SASB and the European Commission's Guidelines on non-financial reporting: Supplement on reporting climate-related information. In line with TCFD, Cluster 2 considers it important that undertakings disclose governance arrangements at management and operations level related to impacts on climate change and climate risk and opportunities alongside other governance disclosures, using cross-references as need be, as long as adaptations to governance processes to cater for the unique characteristics of climate-related risks are clearly explained.*

BC99. Regarding item 3, undertakings should disclose internal climate-related incentive mechanisms, including but not limited to:

- a description of how climate-related remuneration is organised within the undertaking and a quantitative disclosure on remuneration incentives on GHG emissions reduction; and
- a description of how internal carbon pricing schemes are implemented in the undertaking as well as a quantitative disclosure of the volumes at stake and prices applied for the carbon pricing scheme used (CapEx shadow price, R&D investment shadow price, internal carbon fee/fund directly affecting the profit and losses of the business units, others).

Rationale: Disclosure item 3 aims to provide transparency on the governance tools an undertaking has implemented to ensure that the implementation of GHG-reduction targets and anticipation of transition risks is ensured in the company. This includes climate-related remuneration at board and management/operational levels, as well as, internal carbon pricing schemes. Reporting on climate-related remuneration / monetary incentives are discussed and deemed useful by the TCFD proposed guidance on climate-related metrics, targets and transition plans[47], the CDP climate change questionnaire (Section C1) and the common prototype developed by the CDP, CDSB, GRI, IR and SASB. Cluster 2 deems this to be 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. The rationale for the second narrative data point is laid out hereinbelow in the dedicated "Carbon Pricing" section.

How to disclose?

[To be developed]

[47] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021, p. 24. Available here.

Climate Policies and Targets

BC100. This section contains proposals from Cluster 2 for specific disclosures on policy commitments on climate change mitigation and climate change adaptation as well as targets on energy intensity, GHG emission reduction, carbon neutrality or net zero48, and other EU specific objectives. The aim is to establish transparency for investors and other stakeholders on how policies and targets support the undertaking's strategic direction.

BC101. Cluster 2 notes that a cross-cutting reference standard on policies and targets is currently under development by Cluster 1. Cluster 2 stresses that an alignment with the reference standard is still pending but absolutely crucial to achieve consistency and clarity. Consequently, proposals made in this document will likely be subject to (significant) changes based on the content of the reference standard.

Climate Policies

Why disclosing on Climate Policies?

EU legislation and recommendations

BC102. 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' Package49 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 Deal50.

BC103. The European Commission's Guidelines on reporting climate-related information51 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.

BC104. 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.

BC105. Article 19a of the CSRD-proposal52 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".

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[48] 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.

[49] 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.

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

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

[52] 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.

BC106. The European Commission's Guidelines on reporting climate-related information53, recommend to describe, among others, policies related to climate change, including any climate change mitigation or adaptation.

BC107. The European Commission's Strategy on Adaptation to Climate Change54 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 Regulation55 for sustainable activities and the Renewed Sustainable Finance Strategy), it will help large companies, SMEs, local administrations, social partners, and the public.

BC108. The ECB56 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

BC109. International Organisation for Standardisation ('ISO') 1400157 defines environmental policies as "intentions and direction of an organization related to environmental performance as formally expressed by its top management".

BC110. Regarding policy commitments, the draft GRI Universal Standards 202158 suggest that organisation should:

- describe its policy commitments for responsible business conduct;
- describe its specific policy commitment to respect human rights;
- provide links to the policy commitments if publicly available, or, if the policy commitments are not publicly available, explain the reason for this;
- report the level at which each of the policy commitments was approved within the organization, including whether this is the most senior level;
- report the extent to which the policy commitments apply to the organization's own activities and to its business relationships;
- describe how the policy commitments are communicated to workers, business partners, and other relevant parties.

BC111. The PTF-ESRS NFRS59 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."

BC112. In its "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans" TCFD defines a transition plan as "an aspect of an organization's overall business strategy that

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

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

[55] 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.

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

[57] ISO 14001:2015, Environmental management system – Requirements with guidance for use, September 2015. Available here.

[58] Draft GRI Universal Standards 2021, p 67. Available here.

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

lays out how an organization aims to minimize climate-related risks and increase opportunities as the world transitions toward a low-carbon economy, including by reducing emissions of its own balance sheet and that of its value chain. ”60

BC113. TCFD further states that “transition plans help an organization deliver on its climate-related strategy and conveys how it plans to achieve its climate-related targets.” Transition plans should be disclosed as part of an organisation’s broader strategy, be anchored in quantitative elements, including climate-related metrics and targets, be approved and overseen by the board, be actionable and linked to specific initiatives, and be detailed and verifiable to allow for verification of progress and achievement of intended outcomes.61

BC114. Based on the joint voluntary initiative of the United Nations Framework Convention on Climate Change (‘UNFCCC’) “Assessing Low Carbon Transition”62, the TCFD’s 2021 consultation63 and the EU LIFE Finance ClimAct’ Project64 general components of robust transition plans can be summarised as follows: Climate target, Material and Intangible investment, Past and future performance of products and services, Decarbonisation levers, Supply chain engagement, Client, Policy engagement and Business model. These elements are further described in Annex 1.

Users’ needs

BC115. Cluster 2 considers that 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

BC116. Cluster 2 observes that there are different interpretations of the term “policies” and concludes 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 understanding of “transition plans”) including different elements (e.g. commitments, targets, action plans and performance metrics and monitoring). Cluster 2 supports a comprehensive understanding of “policies“, but acknowledges that the structure inherent to the ESRS already covers most elements of a policy in separate reporting areas.65

BC117. As a consequence, Cluster 2 considers that the ‘Policies’ reporting area should focus on describing policy commitments related to climate change mitigation and adaptation. Policy commitments related to mitigation and to adaptation should be separate as their goals are different; mitigation policy aims at reducing GHG emissions through different levers (investments in electrification, sustainable products development, etc.) where adaptation aims at managing the undertaking’s physical risks/vulnerability.

BC118. Cluster 2 notes that an undertaking’s transition plan, making reference to policy commitments, GHG reduction targets, key actions and investments reporting on transition and relevant metrics, should be reported on a high-level under the reporting area “business strategy and climate” (see BC 38).

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[60] TCFD, “Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans”, June 2021, pp. 48-49. Available here.

[61] ibid. p. 50.

[62] UNFCCC, “Assessing Low-carbon Transition” (‘ACT’) Initiative. Available here.

[63] TCFD, “Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans”, June 2021. Available here.

[64] EU LIFE, Finance ClimAct, “Sectoral Transition Plan for Industry” Project. Available here.

[65] This analysis may be challenged by the cross-cutting reference standards currently under development by Cluster 1.

What to disclose?

Proposed disclosures for policy commitments to climate change mitigation and climate change adaptation

BC119. Regarding climate change mitigation undertakings should:

- describe policy commitments related to climate change mitigation, detailing their content, perimeter with regards to own activities and the value chain and how they are communicated to stakeholders, including business partners. (Narrative)
- describe how the policy commitments related to climate change mitigation are implemented within own operations and the value chain. (Narrative)

BC120. Regarding climate change adaptation undertakings should

- describe policy commitments related to climate change adaptation, detailing their content, perimeter with regards to the value chain and how they are communicated to stakeholders, including business partners. (Narrative)
- describe how the policy commitments related to climate change adaptation are implemented within own operations and the value chain. (Narrative)

Rationale: Cluster 2 suggests that 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). The disclosure proposal is based on the suggest GRI "Disclosure 2-23 Policy Commitment".[66]

How to disclose?

[To be developed]

Climate Targets

Why disclosing on Climate Targets?

EU legislation and recommendations

BC121. The European Commission has released its "Fit for 55" legislation package67, 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.

BC122. 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 Deal68 and in line with the EU's commitment to global climate action under the Paris Agreement.

[66] Draft GRI Universal Standards 2021, p. 67. Available here.

[67] 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.

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

BC123. Article 19a (2) lit. b) CSRD-proposal 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" 69.

BC124. 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:

- 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.
- Companies should describe the development of GHG emissions against the targets set
- Companies should consider setting targets for 2025 or 2030 and review them every five years.
- Companies may also consider setting a target for 2050 to align with the Paris Agreement.
- Companies should, where appropriate, consider disclosing GHG emissions targets by country or region (including the EU), by business activity, and by subsidiary.
- Companies may consider disclosing an additional intensity target expressed in metric tonnes CO2e per business metric or % reduction of intensity metric, from a base year.70

BC125. In the EU Climate Benchmark Regulation[71], 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:

i. the issuers of the constituent securities publish consistently and accurately their Scope 1, 2 and 3 GHG emissions;

ii. 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**.**

BC126. The European EMAS Regulation[72] 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

BC127. The CDP, CDSB, GRI, IR and SASB' Prototype of a Climate-Related Financial Disclosure Standard[73] proposes to "disclose targets that are set by management to mitigate or adapt to climate change-related risks, maximise climate-related opportunities and achieve strategic goals, including details of:

[69] 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.

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

[71] 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.

[72] 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.

[73] CDP, CDSB, GRI, IR and SASB, "Reporting on enterprise value Illustrated with a prototype climate-related financial disclosure standard", December 2020.Available here.

- the target and associated ambition, such as: science-based targets to achieve 2 degree Celsius warming or lower; targets that relate to the reduction of GHG emissions, water usage, energy usage in line with anticipated regulatory requirements or market constraints or other goals;
- plans for achieving the target, including how those plans will be resourced; and
- key performance indicators used to assess performance against targets and strategic goals".

The paper also proposes that entities "describe the methodology used for the calculation or estimation of metrics and targets, scope of what is included, and any assumptions underlying the calculation or estimation, including details of the year in which the target was set, the baseline from which performance is measured, and the year the entity will achieve the target".

BC128. TCFD[74] 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 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".

BC129. In the "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans"[75], 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).

BC130. The CDP[76] 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).

BC131. The Science Based Target initiative ('SBTi') in its 2021 guideline[77] 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.

BC132. According to the SBTi manual 2021[78], undertaking should set climate-related targets based on the following requirements:

i. Cover a minimum of 5 years and a maximum of 15 years
ii. Ensure the target boundary is aligned with the GHG inventory boundary
iii. Determine how to treat subsidiaries, parent companies must set SBTs for subsidiaries in accordance with the selected organisational boundary approach
iv. Exclude the use of offsets
v. Exclude avoided emissions
vi. 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

[74] TCFD, "Final Report Recommendations of the Task Force on Climate-related Financial Disclosures", 2017, p. 22. Available here.

[75] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021, p. 40. Available here.

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

[77] SBTi, "SBTi's Criteria and Recommendations", April 2021. Available here.

[78] SBTi, "SBTi Corporate Manual", June 2021. Available here.

BC133. 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."[79]

BC134. 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:

i. Banks shall set a 2050 target to support meeting the temperature goals of the Paris Agreement.

ii. Banks shall set an interim target for 2030 or sooner and may set further interim targets prior to that date.

iii. 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).

iv. 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.

a) IPCC scenarios and scenarios derived from IPCC-qualifying models

b) 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)

c) The scenarios selected shall be "no-overshoot" or "low-overshoot" scenarios (e.g. scenarios P1 and P2 of the IPCC).

d) The scenarios selected shall rely conservatively on negative emissions technologies.

e) The scenarios selected shall have reasonable assumptions on carbon sequestration achieved through nature-based solutions and land use change.

f) Undertakings shall disclose which scenario their climate targets are based upon (scenario name, date and provider).

g) 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).

BC135. The SBTi "foundations for science-based net-zero target setting in the corporate sector" 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."[80]

BC136. SBTi further states that "reaching a state of net-zero emissions consistent with limit warming to 1.5°C involves two conditions:

[79] Ibid. p. 31.

[80] SBTi, "Foundations for Science-based Net-zero Target Setting in the Corporate Sector", 2020, p. 13. Available here.

i. To achieve a scale of value-chain emission reductions consistent with the depth of abatement achieved in pathways that limit warming to 1.5°C with no or limited overshoot; and

ii. To neutralize the impact of any source of residual emissions that remains unfeasible to be eliminated by permanently removing an equivalent amount of atmospheric carbon dioxide.

Companies may reach a balance between emissions and removals before they reach the depth of decarbonization required to limit warming to 1.5ºC. While this represents a transient state of net-zero emissions, it is expected that companies will continue their decarbonization journey until reaching a level of abatement that is consistent with 1.5ºC pathways."[81]

BC137. GRI 305 (2016)82 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."

BC138. 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.

BC139. The NZI Guideline states couple of principle regarding net zero GHG emissions target:

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:

i. 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.

ii. Organisations can only contribute to the trajectory towards global carbon neutrality.

iii. Emission reductions and negative emissions (also called 'removals') are rigorously distinguished and counted separately.

iv. 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.

v. 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

BC140. Cluster 2 considers that all undertakings should report their detailed emissions reduction targets in absolute Scope 1, Scope 2, and significant categories of Scope 3 emissions, as well as carbon intensity, if relevant (depending on the sector), in line with the CSRD-proposal and the target of 55% net reduction by 2030 as well as the objective of climate neutrality by 2050.

BC141. When emissions reduction targets are disclosed, Cluster 2 considers that they should follow common rules that are elaborated upon hereafter (in the "What to disclose " and "How to disclose" parts) to foster comparability, as far as possible.

BC142. Cluster 2 considers that 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. Cluster 2 observes that there is not yet consensus on the definition and methodologies for assessing climate neutrality and net zero emissions at the entity level.

[81] Ibid. p. 32.

[82] GRI 305: Emissions (2016). Available here.

BC143. Cluster 2 considers that net zero GHG emissions should concern only direct and indirect (Scope 1, 2 and 3) GHG emissions and removals under direct control of the reporting entity.

BC144. Cluster 2 considers that further guidelines on sector carbon budgets, related emissions scenarios and allocation approaches to undertaking would be helpful for undertakings to set net-zero targets .

What to disclose?

Proposed disclosure of climate targets

BC145. Climate targets are valuable forward-looking information that undertakings should disclose. Both rely on modelling efforts that require a deep integrated thinking on the business model, the market demand evolution, the products performance and the sourcing strategy, etc.

BC146. Defining quantified emissions reduction targets is a key step for undertakings to conduct an effective transition towards global net zero. Thus, the disclosure of total GHG emissions reduction targets is the central point of this section. Other disclosures on energy or climate-related targets are proposed below as options to be discussed.

BC147. Cluster 2 considers that undertakings disclosing GHG emissions reduction targets should follow consistent rules to become more comparable and suggest the following elements (see the details of target inputs in the "How to disclose" part):

i. Emissions reduction targets (absolute value and/or intensity)

ii. Perimeter (Activities and Scopes),

iii. Milestones and Target years,

iv. Baseline year's emissions.

BC148. For comparability reasons and to be aligned with the EU targets (-55% in 2030), if the reporting entity disclose 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 timeframe to implement management plans and monitor improvements.

BC149. For comparability and reliability reasons, if the reporting entity disclose an emissions reduction target, the base year should be chosen between 2015 and 2022 (or alternatively an average of several years in this period). Historical emissions data before 2015 are not always reliable and available. 2020 and 2021 may be biased by the Coronavirus crisis. The disclosure of past emissions (before the base year if available) should be possible to highlight early achieved reductions (see below).

BC150. Cluster 2 considers that the activities coverage of the target as well as the completeness of the scopes covered are key information; significant scope exclusions should at least be disclosed or targets with significant scope exclusions should even not be disclosed.

BC151. The setting of targets relies on a modelling effort that should generally encompass the following elements (see the details of the modelling effort in the "How to disclose" part):

i. Past emissions as a starting point,

ii. Methodology between contraction and sectoral decarbonisation approach,

iii. Assumptions on business and countries' emission factors evolution,

iv. IPCC Scenarios,

v. Split of the expected contributions from the different reduction levers,

vi. Sensitivity analysis.

BC152. Cluster 2 considers that GHG emissions reduction targets between Scope 1 and 2 and Scope 3 should 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

are estimates (emissions sources and data are not under the control of the reporting entity for most categories of Scope 3). Moreover, uncertainties associated with scope 3 categories estimates (due to limited reliability and precision) may be higher than the planned reduction limiting the value of monitoring it.

BC153. Undertakings should report targets on Scope 1 and 2 GHG emissions in absolute emissions.

BC154. Undertakings, depending on their sector, should report targets on Scope 1 and 2 in intensity terms when 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 will be more difficult to define. Undertakings disclosing carbon intensity ratios (see “Energy Intensity and Carbon Intensity” section under “Climate Performance Measures” below) should be able to set targets in intensity terms on top of in absolute terms. Both are usually complementary and intensity targets allow for comparison overtime whatever the perimeter evolutions.

BC155. Given the growing importance of Scope 3 emissions, Cluster 2 considers that all undertakings should report on related targets, but only related to their significant Scope 3 categories (see below in Climate performance measure section GHG emissions) in absolute and/or intensity values The target on Scope 3 emissions in intensity terms should be disclosed when the denominator exists and is relevant.

BC156. Undertakings should report their GHG emission targets (both absolute and, if relevant, intensity) by decarbonisation lever , e.g. presented as a waterfall scheme between current emissions and 2030 targets (see below illustration).

BC157. Most frequent levers of decarbonisation may be:

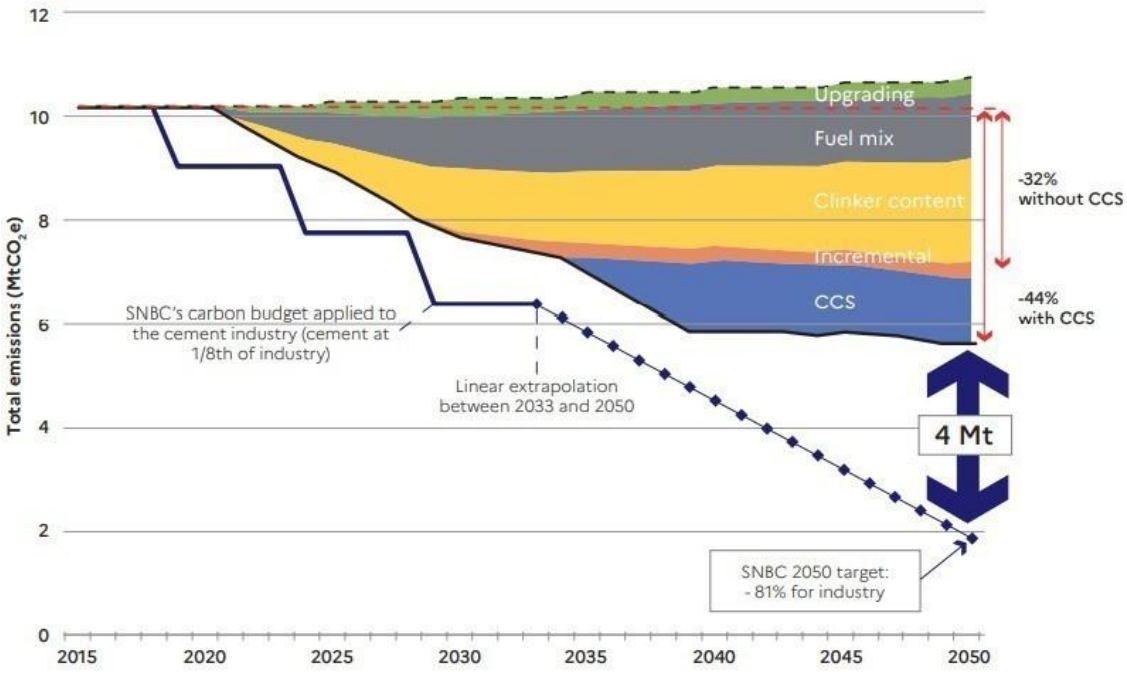
- Increase the use of renewable energy,
- Improve energy efficiency of industrial processes,
- Reduce energy consumption of buildings,
- Switch the fleet to low carbon vehicles,
- Reduce Carbon footprint of supply chain,
- Reduce Carbon footprint of products,
- Reduce business travels, etc.

Undertakings should report GHG emission reduction targets of both absolute and, if relevant, intensity values over the forward-looking period between base year and target year with all milestones. These figures should be translated in a graph aiming at gathering all data points to build a decarbonisation trajectory or roadmap (see hereafter illustrative examples from the cement sector mixing milestones and levers concerning the French National Strategy[83]).

Illustrative example French cement sector compared to the national target:

[83] Illustrative example of the French cement sector compared to the national target from EU Life ClimAct Project on Sectoral Transition Plan. Available here.

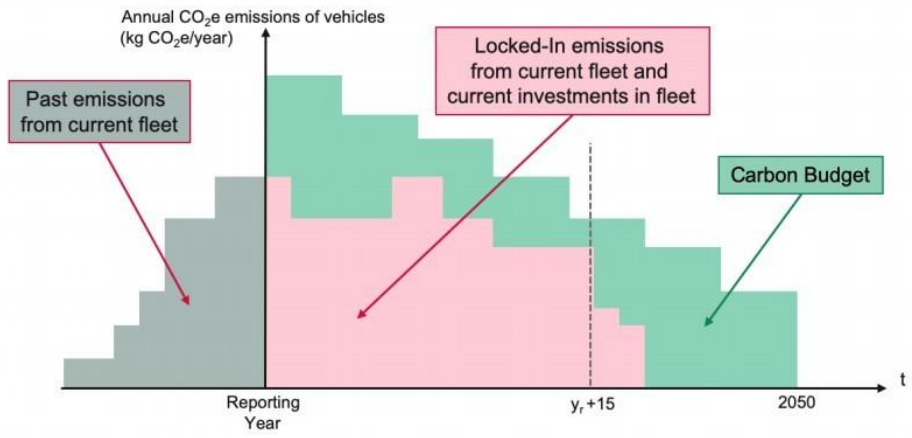
Figure 6. Change in greenhouse gas emissions from the cement sector by 2050 BAU scenario.



BC158. While modelling the forward-looking emissions for the GHG emissions reduction targets setting, the reporting entity could also evaluate its locked-in emissions. These emissions correspond to those that will necessarily be emitted due to operation of existing and planned assets of the undertaking. The objective is to demonstrate the difference between the emissions of the undertaking's existing and planned assets from the reporting year to 2050, and the undertaking's carbon budget over the same period. The concept of locked-in emissions allows to make a judgment on the company's outlook in more distant periods than the ones of investment plans but necessitates a robust methodology to calculate an undertaking's carbon budget. Analysing an undertaking's locked-in emissions towards science-based remaining budgets introduces the means to scrutinise the potential cost of inaction, including the possibility of stranded assets(see hereafter an illustrative example from the ACT generic methodology84). Locked-in emissions could be further used for assessing the potential stranded assets for the financial exposure to transition risks (see last section on "Financial Exposure to Physical and Transition Risks; Financial Opportunities").

[84] See e.g. ACT Assessing Low Carbon Transition generic methodology. Available here.

Locked-in emissions example:



BC159. Although Cluster 2 considers that there is not yet consensus on the definition and methodologies for assessing climate neutrality and net zero emissions at enterprise level, Cluster 2 recognises that, 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. Cluster 2 further recognises a need for transparency on the credibility of those commitments to avoid greenwashing(. Therefore, Cluster 2 proposes that undertakings 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.

BC160. Other disclosure requirements on energy and climate-related targets could be disclosed optionally to address specific EU policy objectives particularly in relation to buildings and transport energy efficiency and carbon intensity:

- Activity energy intensity for undertakings belonging to the high GHG-emission sectors as defined above (expressed in kWh/unit of production)
- Offices energy intensity for all undertakings (offices buildings occupied as tenant or owner expressed in kWh/m2)
- Carbon intensity of the undertaking's tertiary activities (occupied offices buildings and business travels expressed as kg CO_2e/FTE)
- 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)

These optional 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.

How to disclose?

[To be further developed]

Disclosing rules

BC161. Cluster 2 considers that undertakings disclosing emissions reduction targets shall follow consistent rules to become more comparable. Based on EU regulation and global reporting frameworks, targets setting shall contain the following proposed elements.

- Past emissions. Undertakings should report past emissions as they allow to understand if the base year is robust in terms of GHG profile, as well as to give deserved credit for past progress.
- Baseline year's emissions. If it is difficult to identify a single year that is representative, undertakings should instead use average GHG data over multiple consecutive years to form a more representative base period that smooths out unusual fluctuations in emissions. For comparison purposes, a recommended base year (2015 for instance) or at least a common period (one base year between 2015 and 2019 or an average baseline calculated over several years in that period) could be required by the standard setter. Baseline data before 2015 are not systematically available and 2020 is not a comparable year.
- Target years, milestones and time horizons. A first option for undertakings would be to set target years every 5 years as follows – 2020, 2025, 2030. Another option would be to set target years every three years as follows – 2021, 2024, 2027, 2030. However, the first target year of application may be 2023. In addition, companies should pay specific attention to the 2030 and 2050 milestones. 2030 is a clear milestone in the EU. 2050 is probably a long-term time horizon for certain sectors but may be relevant for activities and products with long lifespan such as construction or aircrafts. In-between, undertakings may define common milestones for comparability purposes.
- Target emissions. Target emissions should be set covering Scope 1, Scope 2, and significant categories of Scope 3 emissions (absolute value), as well as carbon intensity on the relevant scopes depending on the sector (relative value). Climate target should aim at being aligned with the 1.5°C climate target and the EU Climate Law (-55% in 2030 and carbon neutrality in 2050), where appropriate. Therefore, the trajectory should be disclosed in a graph with reference to a 1.5°C scenario.
- Scenarios. Undertakings should disclose widely accepted science-based decarbonisation scenarios to set both intermediate and long-term targets that are aligned with the climate objectives in the CSRD-proposal[85] and in the EU Climate Law. They should use scenarios and target trajectories that come from credible and well-recognised sources. They should provide rationale for the chosen scenarios.
    i. Undertakings should use scenarios such as the IPCC scenarios and the scenarios derived from the IPCC qualifying models.
    ii. Undertakings should use scenarios such as the IEA scenarios (e.g. NZE2050 scenarios).
    iii. The selected scenarios should be "no-overshoot" or "low-overshoot" scenarios (e.g. scenarios P1 and P2 of the IPCC). Undertakings should take into consideration the list of scenarios in Annex 4 of the SBTi.
    iv. The selected scenarios shall rely conservatively on negative emissions technologies.
    v. The selected scenarios should have reasonable assumptions on carbon sequestration achieved through nature-based solutions and land use change
    vi. Undertakings shall disclose which scenarios their climate targets are based upon, including the name, date and provider of the scenarios.
    vii. The selected scenarios should, where possible, minimise misalignment with other SDGs (e.g. according to some research scenario, P4 of the IPCC not aligned with Biodiversity issue and food security[86]).

[85] 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.

[86] IDDRI, "Towards a climate change ambition, that (better) integrates biodiversity and land use and the update study", 2019 and 2021. Available here and here

viii. To complement iv. and v., Cluster 2 would recommend having a conservative approach related to the benefits of unproven technological developments / low-maturity technologies.

- Assumptions. Undertakings should disclose assumptions relating to business evolution (volume, demand, regulatory factors) and to emission factors by country.
- Sensitivity analysis information. Undertakings should disclose the sensitivity of various assumptions to changes in key parameters such as the IPCC scenarios, customer preferences, improvement of technologies and processes, emergence of new technologies, etc. It will allow investors and other stakeholders to have a clear understanding of the process and modelling effort. It will help them understand not only the outcomes, but also the pathway that leads to that outcome (i.e. the how and why of those outcomes).
- Reduction levers. Undertakings should disclose the split of the expected contributions from the different reduction levers. Undertakings shall disclose the targeted potential GHG abatement of each technology, process or measure (for instance, use of renewable energy, increasing the energy efficiency of industrial processes, reducing the energy consumption of buildings, switching the fleet to low carbon vehicles, etc.) that are foreseen to achieve the emissions reduction target (see examples of actions in the Actions and resources reporting area). Consistency of potential GHG abatements needs to be verifiable and based on robust international scenario such as the IEA scenarios, IPCC models or any recognised technical sources.
- Methodology. Undertakings should disclose the methodology between contraction and sectoral decarbonisation approach.

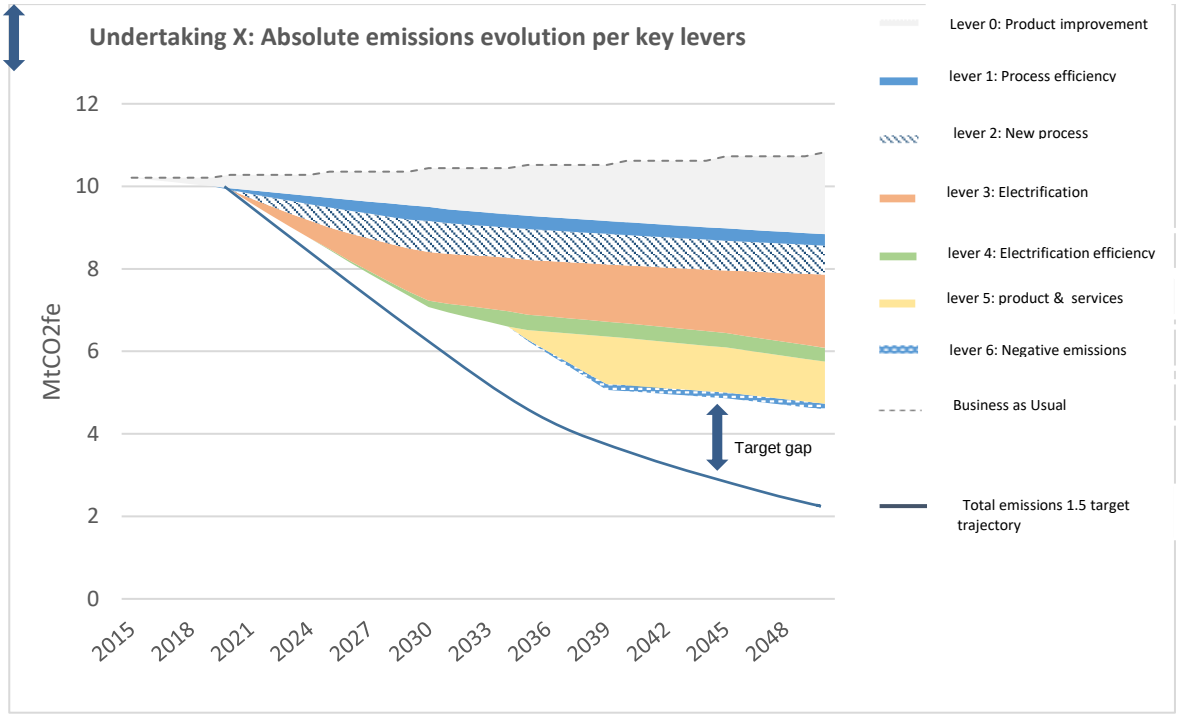
BC162. Undertakings should exclude the use of offsets from targets setting. Offsets are discrete GHG reductions used to compensate for GHG emissions elsewhere. They are calculated relative to the baseline that represents a hypothetical scenario for which emissions would have been in the absence of the mitigation project generating the offsets. Offsets shall not be counted as reductions toward meeting a climate target.

BC163. Undertakings should exclude avoided emissions from targets setting. The impact of avoided emissions is not equivalent to changes in the amount of GHGs emitted into the atmosphere. Avoided emissions shall not be counted as reductions toward meeting a climate target.

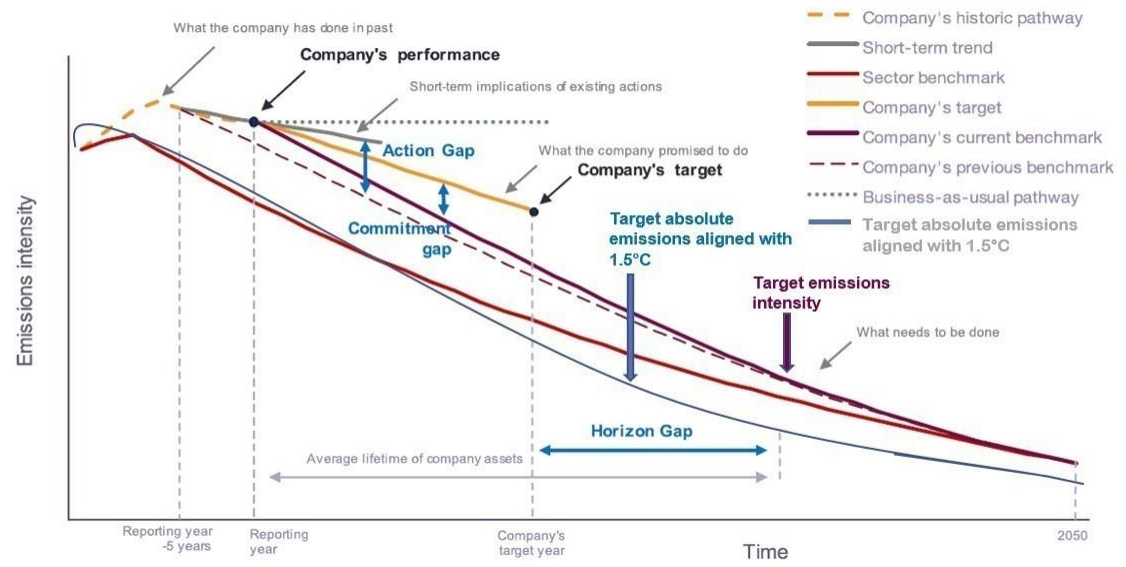
Sources of information

BC164. Undertakings can use the existing bibliography (i.e. IEA or IPCC reports) as well as the following examples to report decarbonisation trajectories of both absolute and intensity emissions.

Cluster 2: Illustrative example Absolute emissions reduction levers



Cluster 2: Illustrative example - Target in intensity and absolute



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Climate Actions[88] and Dedicated Resources

BC165. This section contains proposals from Cluster 2 for disclosures 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.

[87] Illustrative example from the initiative Assessing Low Carbon Transition.

[88] The wording “action plans” has been replaced by “actions” for consistency. “Transition plans” are actually covering all reporting areas.

BC166. Cluster 2 notes that a cross-cutting reference standard on actions plans and resources is currently under development by Cluster 1. Cluster 2 stresses that an alignment with the reference standard is still pending but absolutely crucial to achieve consistency and clarity. Consequently, proposals made in this document will likely be subject to (significant) changes based on the content of the reference standard.

Why disclosing on Climate Actions and Dedicated Resources?

Background

BC167. 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.

BC168. 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.

BC169. All transports – road, rail, aviation and waterborne transport – will have to contribute to the 55% reduction effort89. 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.

BC170. 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.

BC171. 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

BC172. The EU launched in 2019 the European Green Deal[90] 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[91] aims at making Europe a climate-resilient society by 2050.

BC173. Article 19a (e) of the CSRD-proposal[92] requires entities to disclose “a description of any actions taken, […], to prevent, mitigate or remediate [actual or potential adverse impacts]”.

[89] 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.

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

[91] 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.

[92] 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.

BC174. Under the Taxonomy Regulation[93], 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.

BC175. 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.

BC176. Annex II of the EMAS Regulation[94] 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.

BC177. Annex IV of the EMAS Regulation[95] 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

BC178. The European Commission's Guidelines on reporting climate-related information[96] 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

BC179. TCFD's 2021 public consultation[97] identifies several Transition Plan Elements that entities should consider disclosing (Table E2 Alignment of 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.

- 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
    - Overview of current and planned initiatives to reduce climate-related risks and increase climate-related opportunities

[93] 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.

[94] 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.

[95] 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.

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

[97] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

- 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

- Financial plans: Transition plan clearly articulates investments and other financial implications in supporting financial plans and budgets
  - Articulation of, and progress against, climate-related targets outlining amount of expenditure or capital investment deployed toward climate risks and opportunities
  - Articulation of how expenditure or capital investment supports decarbonisation strategy

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.

BC180. The CDP in its 2021 questionnaire[98] 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.

BC181. GRI 103[99] 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

BC182. 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

BC183. Cluster 2 considers that the disclosure by undertakings of their actions 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.

BC184. For clarity reasons and fore the reasons as for policies, Cluster 2 recommends that undertakings should split their mitigation and adaption actions and resources.

BC185. Cluster 2 suggests that the levers of decarbonisation in the "Climate Target" section and the key actions in the "Actions & Resources" section with their contribution to the achievement of emissions reduction target should be the same.

BC186. Cluster 2 argues that 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.

What to disclose?

Proposed disclosure of mitigation actions and resources

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

[99] GRI 103: Management Approach (2016). Available here.

BC187. Cluster 2 considers that undertakings should describe the major mitigation actions which will allow them to reach their GHG emission reduction targets and manage their transition risks and opportunities. Actions should be clearly connected to the publicly disclosed targets and associated emission categories to ensure coherence of their reporting.

Rationale: The proposed disclosure aims at providing assessment elements on the reliability and robustness of undertakings' targets to reduce their emissions and manage their risks and opportunities.

BC188. When reporting their key mitigation actions and associated resources to achieve GHG emission reduction target, undertakings should provide:

(a) a description of the major actions which are undertaken by the company as part of its strategy to achieve its targets in GHG emission reduction. The actions should correspond to the decarbonisation levers that have been identified by undertakings in the "Climate Targets" section such as increasing the use of renewable energy, increasing the energy efficiency of industrial processes, reducing the energy consumption of buildings, switching the fleet to low carbon transport, reducing the carbon footprint of supply chain, reducing the carbon footprint of products, reducing short-lived climate forcers, and enhancing policy engagement.

(b) the time horizon for completing these actions. The time horizon should be consistent with the milestones or the target years.

(c) the expected outcomes of these actions and in particular the expected GHG emission reduction.

(d) resources dedicated to these actions, including:

- the R&D budget. The R&D budget should be presented at least for the current year when relevant. Cluster 2 recognises that climate-related R&D expenditures need to be further defined.
- the CapEx (past, current and future). Past data could be presented in aggregate for the last three years when available to put in perspective the evolution over time. Future data should be presented for the next three to five years. The future CapEx should be consistent with the level of ambition of the target and the time horizon for these actions to be completed.
- Disclosure of OpEx related resources and in particular annual climate-related full-time equivalent (FTE) is still to be discussed as the climate-related OpEx and FTEs are still difficult to define and estimate.

Rationale: For coherence and clarity, Cluster 2 considers that the description of key actions should be linked to the levers of decarbonisation disclosed in the "Climate Targets" section. The proposed disclosure on the time horizon and the expected outcomes aims at clarifying the level of ambition of undertakings. Cluster 2 acknowledges that the expected outcomes may depend on many external factors and that this forward-looking information is purely indicative. Cluster 2 sees well-founded expectations of R&D budget and CapEx depending on the kind of key actions. Therefore, Cluster 2 requires this information when relevant (e.g. engaging with policy makers does not bring R&D cost or CapEx).The disclosure of OpEx and annual FTE should also be disclosed optionally when relevant (e.g. in the case for example of engagement with policy makers). The disclosure of CapEx and OpEx should be coherent but not limited or restricted to those presented under the Taxonomy Article 8 disclosures. The communication of undertakings' strategy and targets on climate may go beyond the taxonomy perimeter. The focus should be first given to the coherence with strategy and target sections. When it comes to the CapEx plan, the one requested under Article 8 of the Taxonomy Regulation may well fit the purpose.

BC189. The following table is a possibility to present the abovementioned information. The split by key actions of dedicated resources should probably remain optional but the total of the past, current and planned CapEx would certainly bring credibility to the transition plan.

Key actions description	Time horizon	Expected GHG emissions reduction	Dedicated resources			
			R&D	Past CapEx*	Current CapEx*	CapEx plan*
Increase the use of renewable energy	*2025*	*Tons of CO2e*	*Current year*	*Past 3 years*	*Current year*	*Next 5 years*
Improve energy efficiency / electrification of industrial processes						
Reduce energy consumption of buildings						
Switch to low carbon transport						
Reduce carbon footprint of supply chain						
Reduce carbon footprint of products						
Reduce short-lived climate forcers						
Enhance policy engagement (etc.)						

Proposed disclosure of adaptation actions and resources

BC190. Cluster 2 considers that undertakings should describe the "adaptation" action plan which will allow them to manage their physical risks as well as their opportunities related to both acute and chronic shifts in climate patterns.

Rationale: The proposed disclosure aims at providing assessment elements on the reliability and robustness of undertakings' actions towards managing their physical risks and adaptation opportunities

BC191. When reporting their key adaptation actions and associated resources to manage physical risks, undertakings should provide:

(a) a description of major climate adaptation measures which are undertaken by the company as part of its risk management process (e.g. climatic forecasts, insurance, changes in process, product changes flood protection, etc);

(b) the time horizon for completing these actions.

(c) the expected outcomes of these actions.

(d) the resources dedicated to these actions, including:

- the R&D budget. The R&D budget should be presented at least for the current year. Cluster 2 recognises that climate-related R&D expenditures need to be further defined.
- Past data could be presented in aggregate for the last three years if available to put in perspective the evolution over time. Future data should be presented for the next 3 to 5 years. The future capex should be consistent with the level of physical risks and the time horizon for these actions to be completed.
- Disclosure of OpEx related resources and annual climate-related full-time equivalent is still to be discussed as the climate-related OpEx and FTEs are still difficult to define and estimate.

Rationale: For coherence and clarity, Cluster 2 considers that the description of key actions should be linked to major risks and opportunities disclosed in the risk section. The proposed disclosure on the time horizon and the expected outcomes aims at clarifying the involvement of undertakings to cope with climate change. Cluster 2 acknowledges that the expected outcomes may depend on many external factors and that this forward-looking information is purely indicative. Cluster 2 sees well-founded expectations of R&D budget and Capex depending on the kind of key actions. Therefore, Cluster 2 requires this information when relevant (e.g. engaging with policy makers does not bring R&D cost or CapEx).The disclosure of OpEx and annual FTE should also be disclosed optionally when relevant (e.g. in the case for example of engagement with policy makers). The disclosure of CapEx and OpEx should be coherent but not limited or restricted to those presented under the Taxonomy art 8 disclosures. The communication of undertakings' strategy on climate change adaptation may go beyond the taxonomy perimeter. The focus should be first given to the coherence with strategy and target sections.

BC192. The following table is a possibility to present the abovementioned information. The split by key actions of dedicated resources should probably remain optional but the total of the past, current and planned Capex would certainly bring credibility to the transition plan.

Key actions description	Time horizon	Expected outcomes	Dedicated resources			
			R&D	Past CapEx*	Current CapEx*	CapEx plan*
Assess physical climate risks and vulnerability (hazards)	*2025*	*List of principal physical risks*	*Current year*	*Past 3 years*	*Current year*	*Next 5 years*
Evaluate value at risk						
Adapt damage insurance coverage						
Invest in flood, heat or cold waves, wildfires, etc. protection						
Relocate production facilities						
Enhance policy engagement (etc.)						

How to disclose?

[To be developed]

Definitions

BC193. An action plan is a plan that outlines how a company will transition from where it is now to where it needs to get to in order to thrive in (i) 2030 when net GHG emissions will have been reduced by at least 55% of their 1990 level and (ii) 2050 in a net-zero carbon world.

Disclosing rules (Actions)

BC194. Cluster 2 considers that companies should follow strict rules when disclosing climate actions in order to increase the comparability. Based on EU regulation and global reporting frameworks, actions should contain at least the following proposed elements.

- *Supply chain engagement. Undertakings should disclose their measures of success when engaging with suppliers.*
- *Client. Undertakings should disclose their action levers to encourage clients to buy low-carbon products and services and the scope used (percentage of clients or revenues). Several action levers such as awareness campaign, compensation, purchasing rule, etc. contribute to shift demand towards low-carbon products/services. They should also disclose how they encourage clients to reduce their GHG emissions.*
- *Policy engagement. Undertakings should disclose details of the climate issues on which they have directly been engaged with policy makers and the proposed legislative solutions.*

Disclosing rules (Resources)

BC195. Cluster 2 considers that companies should follow strict rules when disclosing climate resources in order to increase the comparability. Based on EU regulation and global reporting frameworks, resources should contain the following proposed elements.

- *Decarbonisation roadmap. Undertakings should disclose how the investment plan is linked towards meeting the different mitigation solutions. Targeted potential GHG abatement of each technology and processes should be disclosed. Potential GHG abatement needs to be verifiable. When possible, undertakings should disclose to which extent their investment plan is aligned with the technological pathways to contribute to the achievement of 1.5°C climate*

goals or EU climate targets. They should also disclose the overall investment plan compliance with the DNSH criteria of the Taxonomy Regulation[100].

- *Material investment. Undertakings should disclose CapEx and OpEx aligned with the Taxonomy Regulation[101]. They should disclose the difference between CapEx and OpEx low carbon investment and the total investment of the undertakings.*
- *Intangible investment. Undertakings should disclose a ratio of R&D investments in mitigation-relevant technologies. The indicator identifies the ratio between the company's R&D investment and the required investment as set by a scientific benchmark of R&D requirements.*

Climate Performance Measures

Energy Consumption & Mix

Why disclosing on Energy Consumption & Mix?

Background

BC196. 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[102]. In the European Union, the energy sector contributes over 75% of total GHG emissions[103].

BC197. 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.

BC198. The IPCC's Special Report on Global Warming of 1,5°C[104] 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.

[100] 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.

[101] 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.

[102] 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.

[103] 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.

[104] IPCC, "Special Report on Global Warming of 1.5 °C", 2018. Available here.

BC199. 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.

BC200. Another good reason to disclose fossil fuel purchases is about energy sovereignty and security: most EU oil/gas is imported from non-EU countries.

EU legislation and recommendations

BC201. The CSRD-proposal[105] 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".

BC202. The European Green Deal[106] 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[107] 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.

BC203. Existing EU legislation and guidelines already mandate reporting entities to disclose metrics related to energy consumption and mix (European Commission's Guidelines on reporting climate-related information[108], SFDR[109], EMAS Regulation[110]) or require the efficient use of energy (e.g. Article 8 of the Energy Efficiency Directive[111] regarding energy audits or Article 11 of the Industrial Emission Directive[112] (2010/75/EU) regarding general obligations of operators).

BC204. The SFDR 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.

BC205. The Taxonomy Regulation[113] emphasises the primary role of energy consumption in reducing GHG emissions. Energy or electricity consumption as such is also referred to in the delegated act, e.g. in the technical screening criteria for manufacture of aluminium or for water supply and waste treatment.

[105] 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.

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

[107] 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.

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

[109] 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.

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

[111] Proposal or a Directive COM/2021/558 of the European Parliament and of the Council on Energy Efficiency. Available here.

[112] 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.

[113] 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.

BC206. The European Commission's proposal for a new Renewable Energy Directive[114] in the 'Fit-for-55' Package[115] 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.

BC207. In order to monitor these commitments, the European Commission's proposal for a new Energy Efficiency Directive 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".

BC208. 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.

Global reporting frameworks

BC209. Existing international frameworks generally require detailed reporting of energy consumption and mix. CDP[116], GRI[117] and SASB[118] provide clear methodologies to calculate the energy consumption within the organisation.

BC210. GRI additionally 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 reporting entity 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.

BC211. Additionally, CDP proposes the publication of fuels consumption as feedstocks.

Users' needs

BC212. Cluster 2 argues that reducing GHG emissions from the global energy consumption allows companies to support the EU policy goal of climate neutrality.

BC213. Moreover, Cluster 2 considers that decarbonising and saving energy bring multiple benefits to businesses through enhancing organisations' competitiveness in terms of cost reductions, limiting their environmental liabilities, and granting better preparation for future

[114] 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.

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

[117] GRI 302: Energy (2016). Available here.

[118] SASB Standards. Available here.

environmental regulations, thereby decreasing the transition risk exposure of these organisations.

BC214. Cluster 2 also stresses that the measurement 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. Cluster 2 observes that energy-based metrics are clearly required by the European Supervisory Authorities ('ESAs') in their supervisory rulebooks for financial institutions to assess climate-related risks that could affect financial stability.

Conclusions

BC215. Energy accounts for a significant share of worldwide GHG emissions and their growth as measured by the IEA (see BC 194). 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. These effects, particularly on climate change, can only be remediated in the long term. Therefore, Cluster 2 considers it important that undertakings create transparency on how their energy consumption and mix cause and drive GHG emissions and other adverse impacts on climate change.

BC216. Cluster 2 observes that the EU has set out in the revised directives on renewable energy and energy efficiency a comprehensive legislative framework based on energy decarbonisation and sobriety in order to achieve climate change mitigation objectives. The new Renewable Energy Directive proposes a long-term remediation plan with a target of having 38 to 40% renewable energy in 2030 for a 55% emissions reduction aligned with the European Green Deal's commitment. The proposal for a new Energy Efficiency Directives 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.

BC217. Cluster 2 also notes that 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 and ISO 14064-1, which have become internationally accepted standards.

BC218. Consequently, Cluster 2 argues that the reporting of energy consumption is necessary to guarantee the accuracy of emissions accounting. Cluster 2 adds that the breakdown of energy consumption between direct fuel combustion and indirect energy consumption is particularly relevant to better understand the dynamic relationship between energy consumption and GHG emissions reduction at the reporting entity level. From this inside-out perspective, Cluster 2 concludes that transparency on energy consumption and mix is necessary to understand the significant impacts of a company on the environment and people.

What to disclose?

BC219. Considering the above, any organisation should and can reasonably be required to report its total energy consumption in absolute terms within the organisation boundary and provide a detailed mix of this consumption including a breakdown of non-renewables sources.

Rationale: The proposed disclosure aims at providing key underlying indicators of the GHG emission performance of undertakings.

BC220. A detailed breakdown of renewable energy sources could be considered for all or for some specific sectors, notably renewable energy from biomass, water and waste could be disclosed since they often go hand in hand with other sustainability issues.

BC221. Finally, for undertakings active in sectors for which the use of hydrogen is relevant, a disclosure on the share of green hydrogen in the total energy consumption could be added to better monitor the ramp up of green hydrogen (see BC 204).

Proposed disclosure of energy consumption

BC222. Undertakings should disclose the total final energy consumed within the organisation during the reporting period excluding feedstock consumption and including the following components:

- Total fuel consumption from non-renewable sources,
- Total fuel consumption from renewable sources,
- Total consumption of purchased or acquired electricity,
- Total consumption of purchased or acquired heat, steam and cooling,
- Total consumption of self-generated non-fuel renewable energy,
- Total energy consumption obtained by summing the above components.

BC223. Final energy consumption figures should be reported in the table below.

Final* consumption in MWh	N-2	N-1	N
Total fuel consumption from non-renewable sources (excluding feedstocks);			
Total fuel consumption from renewable sources (excluding feedstocks);			
Total consumption of the purchased or acquired electricity**;			
Total consumption of purchased or acquired heat, steam and cooling**;			
Total consumption of self-generated non-fuel renewable energy***;			
Total final energy consumption, obtained by summing the above components			

[Disclosing over the past 3 years is a proposal that would allow an evolution analysis but probably needs to be aligned with other subtopics.]

* Final energy consumption refers to what end users actually consume. The reporting entities may also add a table on primary energy consumption, which refers to energy that has not undergone any conversion or transformation process. Primary energy factors used for the determination of the primary energy consumption (associated with electricity or steam, heat or cooling) may be based on national or regional yearly average values and may take into account relevant European standards.

**The purchase of electricity or other energies with Guaranties of Origins ('GoO') or Renewable Energy Certificates ('REC') should be included in the electricity or heat, steam and cooling and could be added by reporting entities separately if deemed relevant e.g. for Scope 2 GHG emissions reported under market-based approach and for the breakdown between renewable and non-renewable energies below.

***When disclosing self-generated energy consumption, companies should avoid the double counting of fuel consumption (which is already accounted in the first two rows of the table)

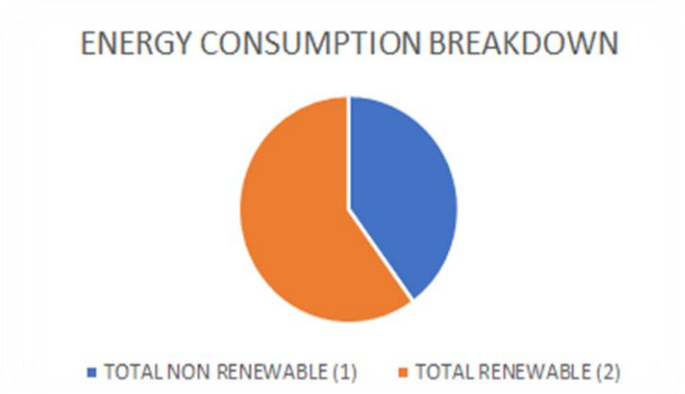
This table has been adapted from the CDP[119] and the GRI[120] proposal on consumption within the organisation. The proposal of the GRI to disclose the energy consumption outside the organisation is not included in the proposal (see BC 208).

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

[120] GRI 302: Energy (2016). Available here.

Proposed disclosure of energy mix

BC224. In addition, undertakings should disclose their energy mix in percentage providing the components listed above (or to be discussed: at least the share of renewable and non-renewable energy), as a pie diagram for instance. This disclosure answers the requirement on the share of non-renewable energy consumption compared with renewable from RTS on ESG disclosure under the SFDR[121] (see BC 202).



BC225. When reporting the renewable energy consumption, undertakings should ensure that the total renewable is the sum of lines 2 (Total fuel consumption from renewable sources) and 5 (Total consumption of self-generated non-fuel renewable energy) of the final energy consumption table showed above plus electricity or heat, steam and cooling from renewable sources with green certificates (e.g. Guaranties of Origins or Renewable Energy Certificates) which has been disclosed separately from the final energy consumption table.

BC226. Undertakings should detail non-renewable energy sources that are used for the calculation of GHG emissions (specific emissions factors) and generates environmental and/or social impacts. The consumption of non-renewable fuels should be disclosed according to the following breakdown: coal, oil, natural gas, nuclear fuels, others.

BC227. Breakdown Figures should be reported in the table below.

Energy consumption mix in MWh and/or %	N-2	N-1	N
Total fuel energy consumption from coal;			
Total fuel energy consumption from oil;			
Total fuel energy consumption from natural gas;			
Total fuel energy consumption from nuclear (electric utilities);			
Total energy consumption from other non-renewable sources			
Total non-renewable (1)			
Total renewable* (2)			
Total energy consumption (1+2)			

BC228. The value of disclosing the breakdown of renewable energy consumption by type (wind, solar, hydropower, geothermal, biomass and marine) is still to be discussed in the following phases, but could be of some interest notably for biomass, water and waste since it can provide users with material information on other environmental topics for instance.

Proposed disclosure of the share of green hydrogen

[121] ESAs, "Final Report on draft Regulatory Technical Standards", 2021. Available here.

BC229. Based on the EU Hydrogen Strategy[122] and the new Renewable Energy Directive[123], the share of green hydrogen in the total energy consumption in percentage can reasonably be required for undertakings active in sectors for which the use of hydrogen is relevant or for which the directive provides sub-targets for renewable hydrogen.

Proposed additional disclosures (developed in other sections)

BC230. The reduction of energy consumption at entity level supporting energy efficiency targets is developed in the "Climate Policy and Targets" and the Energy and Carbon Intensity" sections.

BC231. Relevant and material energy intensity metrics should be defined per sector and per unit of product or services, while considering a life cycle assessment of products such as ISO 14040[124] or the European Commission's Product Environmental Footprint[125] or Taxonomy Regulation[126] activity metrics (see "Energy Intensity and Carbon Intensity" section).

BC232. An additional breakdown by sector should be defined to provide financial institutions accurate data and a common methodology to report on their financial risk or principal adverse impacts related to energy consumption intensity of their lending and investing portfolio (see "Energy Intensity and Carbon Intensity" section).

How to disclose?

[To be developed]

Definitions

BC233. Renewable energy is 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.

BC234. Waste energy should not be included if it is derived from fossil fuels.

BC235. In line with the EU Hydrogen Strategy[127] and the reviewed Renewable Energy Directive[128], renewable hydrogen should be included. Renewable hydrogen is hydrogen produced through the electrolysis of water (in an electrolyser, powered by electricity), and with the electricity stemming from renewable sources. Hydrogen should not be included if it is derived from fossil fuels.

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[122] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions a Hydrogen strategy for a climate-neutral Europe (COM/2020/301). Available here.

[123] 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.

[124] ISO 14040:2006 Environmental management — Life cycle assessment — Principles and framework. Available here.

[125] European Commission, "Environmental Footprint". Available here.

[126] 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.

[127] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions a Hydrogen strategy for a climate-neutral Europe (COM/2020/301). Available here.

[128] 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.

BC236. Biomass means 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.

BC237. Non-renewable fuels should include by default all fuels not described as renewable according to the above definition.

Perimeter

BC238. The reporting organisation shall report energy consumed by entities owned or controlled by the organisation considering the same perimeter as for the carbon emissions.

Calculation methods (Energy Consumption)

BC239. When reporting its energy consumption, undertakings should provide figures for the reporting year and the last two years. If the entity does not consume one of the abovementioned energy sources, it shall report zero.

BC240. All energy data should be reported in Mega-Watthours (MWh) in High Heating Value. If raw data is accounted for in other energy units, such as Giga joules or British Thermal Units, it should be converted to MWh.

BC241. Undertakings should use a consistent conversion factor across all the calculation. The used conversion factors must be referenced or disclosed and chosen from available online calculation tools such as IEA, Onlineconversion.com or those in EPA AP-42[129].

BC242. If raw data is available in volume units, e.g. cubic feet or gallons, or in mass units, e.g. kilograms (kg) or pounds (lb), it should be converted to energy units using factors for upper fuel heating/calorific values. These are available from numerous sources, some of which are listed here-after: IPCC Guidelines for National GHG Inventories[130] (Volume 2, Table 1.2, p1.18-1.19), EPA AP-42 (Annex A), IEA Statistics Manual[131] (Annex 3, p180-183), American Petroleum Institute ('API') Compendium[132] (Table 3-8, p3.20-3.21).

BC243. When reporting self-generated energy consumption, undertakings should avoid the double counting of fuel consumption. If the organisation generates electricity from a non-renewable or renewable fuel source and then consumes the generated electricity, the energy consumption shall be counted once under fuel consumption.

BC244. All fuel consumed for energy purposes inside the organisational boundary should be included, regardless of whether the fuel was purchased or produced by the reporting organisation. If a fuel is combusted, i.e. consumed for energy purposes and not as a feedstock, it should be included. On the contrary, if a fuel is consumed as a feedstock to produce another one, then the feedstock should not be included, but combustion of the produced fuel should be included.

BC245. Undertakings should disclose its all energy consumption considering no netting of energy consumption even if onsite generated energy is sold to a third party.

Calculation methods (Energy Mix)

BC246. Blended fuels deriving from both renewable and non-renewable sources should be split by the proportion contained from each source.

[129] EPA's website. Available here.

[130] IPCC, "2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories", 2019. Available here.

[131] IEA, "Energy Statistics Manual, 2021. Available here.

[132] API, "Compendium of GHG emissions methodologies for the oil and natural gas industry", 2009. Available here.

Greenhouse Gases Emissions

Why disclosing on GHG Emissions?

Background

BC247. The IPCC's Sixth Report[133] 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.

BC248. As reminded by the IPCC's 2018 Special Report on Global Warming of 1,5°C[134], 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%).

BC249. 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.[135]

BC250. 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.

BC251. 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.

[133] IPCC, "Sixth Assessment Report on Climate Change", 2021. Available here.

[134] IPCC, "Special Report on Global Warming of 1.5 °C", 2018. Available here.

[135] EU's ratification of the Paris Agreement, 2016. Available here.

EU legislation and recommendations

BC252. The CSRD-proposal[136] states in recital 41 that with regard to climate-related information, users are "interested in the level and scope of GHG emissions and removals[137] attributed to the undertaking, including the extent to which the undertaking uses offsets[138] 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".

BC253. The EU launched in 2019 the European Green Deal[139] 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[140] 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[141] 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 businesses' GHG emissions is central to verifying that the EU is on the trajectory towards net zero emissions by 2050.

BC254. In July 2021, the European Commission published the "Fit-for-55" package[142]. 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.

BC255. The SFDR[143] requires financial market participants to disclose GHG emissions from investee companies broken down in Scope 1, Scope 2 and Scope 3. From 1st July 2022, Scope 1 and Scope 2 emissions must be calculated and reported. Scope 3 emissions will follow from

[136] 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.

[137] 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).

[138] 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.

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

[140] 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.

[141] 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.

[142] 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.

[143] 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.

1st January 2023. In order to fulfil this reporting requirement, financial market participants need ready-to-use information of the direct and indirect GHG emissions of their investee companies.

BC256. The European Commission's Guidelines on reporting climate-related information[144] recommend that entities in the scope of the NFRD[145] calculate and report direct and indirect GHG emissions according to the three scopes of the GHG Protocol (Scope 1, Scope 2 and Scope 3).

BC257. 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.

BC258. The European Central Bank ('ECB')[146] 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.

BC259. GHG emissions reporting is also required by the EU Emission Trading Scheme ('ETS')[147] and the EU EMAS Regulation[148]. 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[149] 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

BC260. The GHG Protocol and ISO 16064-1 have guided the current corporate management and reporting practice on GHG emissions.

BC261. The GHG Protocol Corporate Standard[150] 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) Standard[151], that includes further requirements and guidance on how to prepare and report on Scope GHG emissions.

BC262. ISO 14064-1[152] is an international standard for quantification and reporting of GHG emissions at an organisation's level. Like the GHG Protocol, ISO 14064-1 distinguishes

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

[145] 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.

[146] ECB, "Guide on climate-related and environmental risks", 2020). Available here.

[147] European Commission, "EU Emissions Trading System (EU ETS)". Available here.

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

[149] 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.

[150] GHG Protocol "Corporate Standard", 2004. Available here.

[151] GHG Protocol "Corporate Value Chain (Scope 3) Accounting and Reporting Standard", 2011. Available here.

[152] 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.

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.

BC263. GRI 305[153] 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. GRI 305 also provides detailed compiling and calculation methods requirements.

BC264. The CDP, in its climate change questionnaire[154], requires in sections C5, C6 and C7 comprehensive data on Scope 1, 2 and 3 emissions and associated calculation methodologies and breakdowns.

BC265. 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 2021 consultation on the "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans"[155] states in addition that "GHG emissions are the critical starting point for any discussion of cross-industry, climate-related metrics and are a component to estimating many other climate-related metrics used by both preparers and users. The absolute and intensity level of emissions is indicative of an organisation's exposure and vulnerability to changes in policies and technology aimed at a transition to a low-carbon economy".

BC266. Regarding Scope 3, the TCFD is currently considering changes in its recommendations.

BC267. "TCFD encourages all financial and non-financial organizations to disclose relevant, material categories of Scope 3 emissions, including financed emissions"[156] (p. 17). TCFD further argues that "data and methodologies have matured sufficiently such that disclosure of relevant, material categories of Scope 3 emissions is now appropriate for all sectors. Disclosure is particularly important for organizations for which Scope 3 emissions account for 40% or more of the total emissions of the organisation or for which Scope 3 emissions have been deemed a significant risk in their value chain. Organisations should disclose Scope 3 emissions in line with the methodology in the GHG Protocol's Scope 3 Standard" (p. 17). The 40 % threshold is also referred to by the SBTi[157] that states "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".

BC268. SASB Standards[158] 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.[159]Carbon neutrality is becoming the inevitable objective of climate policies. As explained in the Summary for Policymakers of the IPCC report on "Global Warming to 1.5°C"[160], "the systemic transitions required for carbon neutrality include a wide range of mitigation options and a net increase in investment in these options".

BC269. To this end, new methodologies are emerging in terms of aligning targets with the Paris agreement and calculating stored emissions.

BC270. With SBTi, companies can set short- and medium-term emissions reduction targets that are consistent with Paris-aligned pathways.

[153] GRI 305: Emissions, 2016. Available here.

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

[155] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

[156] Absolute emissions that banks and investors finance through their loans and investments.

[157] SBTi, "Corporate Manual", 2021. Available here.

[158] SASB Standards. Available here.

[159] SASB Materiality Map. Available here.

[160] IPCC, "Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C", 2018. Available here.

BC271. The Net Zero Initiative[161] provides a way for organisations to describe and organise their climate action in order to maximise their contribution to achieving global carbon neutrality.

BC272. Offset can also be part of a company GHG emissions strategy. High quality emission reduction projects, such as those certified by the Gold Standard[162], offer a multitude of sustainability benefits beyond climate mitigation. Some contribute to the creation of more sustainable livelihoods, others to the preservation of biodiversity and natural resources, and still others to the achievement of the Sustainable Development Goals.

Users' needs

BC273. Cluster 2 considers that 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.

BC274. Cluster 2 further considers that 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.

BC275. The Article 4 of 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. It is therefore necessary that undertakings pursuant to the CSRD report that information through the ESRS.

Conclusions

BC276. Based on the analysis above, Cluster 2 considers that measuring and reporting on GHG emissions is a central element of the ESRS on climate mitigation from an impact and financial materiality perspective and that GHG emissions stemming from companies' own operations and energy consumption as well as from their value chain should be measured and reported.

BC277. Cluster 2 observes that reporting on Scope 1 and 2 GHG emissions is a well-established practice and methodological standards, on which preparers can rely, are readily available.

BC278. Hence, Cluster 2 acknowledges that compiling, managing 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, Cluster 2 shares 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. However, reporting on Scope 3 should be limited to the significant Scope 3 categories, determined at the entity level.

[161] Carbone 4 and Net Zero Initiative, "Net Zero Initiative A Framework for Collective Carbon Neutrality", April 2020. Available here.

[162] Gold Standard. Available here.

BC279. As a consequence, undertakings from all sectors should disclose Scope 1, Scope 2 and Scope 3 GHG emissions.

BC280. Cluster 2 is aware that 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, Cluster 2 considers that 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.

What to disclose?

Proposed disclosure of Scope 1 and 2 GHG emissions

BC281. Undertakings should disclose Scope 1 and 2 GHG emissions in absolute value over the past three years and in relation to a base year to allow investors and other stakeholders to undertake evolution analysis and monitoring the performance. The undertaking should be able chooses a base year that best represents the respective GHG emissions at a given time or period of time. Cluster 2 considers that the baseline should be chosen between 2015 and 2022 to increase comparability. The years 2020 and 2021 should not be taken into account because of the coronavirus pandemic. The baseline could also be an average of 3 years if this increases representativeness.

BC282. The option to add short-lived climate pollutants/forcers that are usually not accounted for in the reporting on GHG emissions, like black carbon and tropospheric ozone, still needs to be discussed.

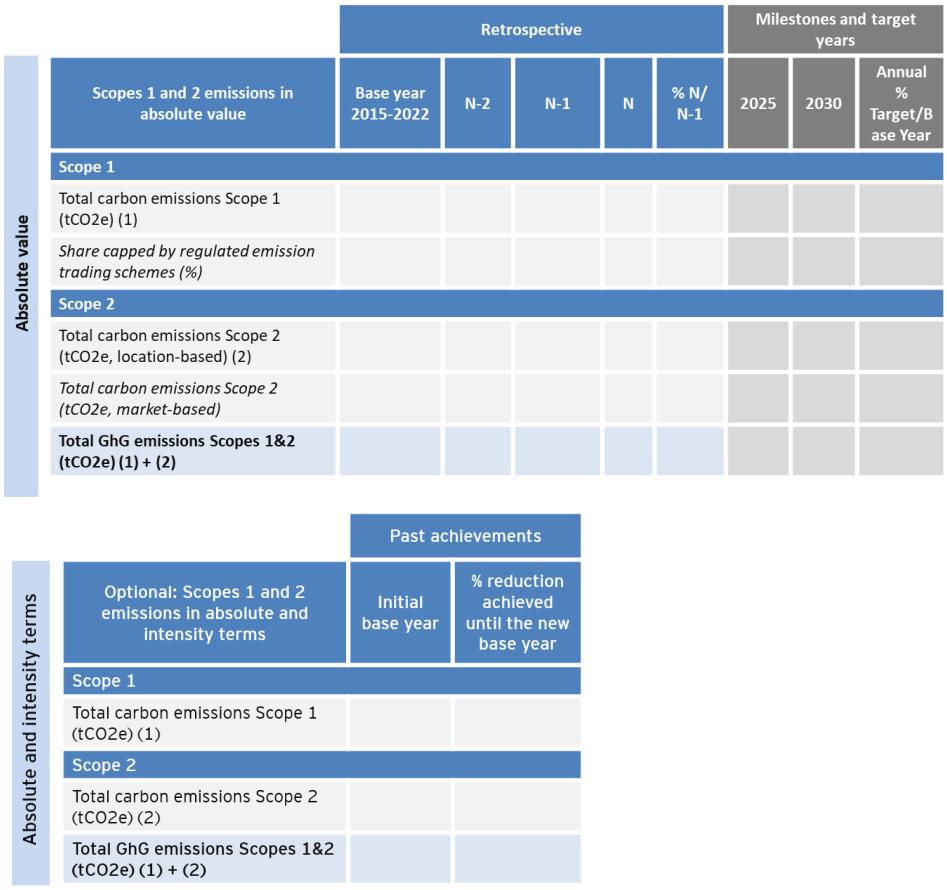
BC283. In addition to the total Scope 1 GHG emissions, undertakings should report separately direct GHG emissions under the regulated emission trading schemes, including the EU ETS and national schemes. This will allow to calculate the percentage of Scope 1 GHG emissions capped by a Cap & Trade Scheme and 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 and Physical Risks" subtopic in the "Performance Measures" section).

BC284. Cluster 2 considers that indirect GHG emissions from purchased energy (Scope 2) should be reported by default in location-based (grid emissions factors) and also in market-based (energy suppliers-specific data) values. Since both approaches have inherent advantages and drawbacks and a choice by the preparer in favour of one or the other could undermine comparability, there is still discussion needed if Scope 2 emissions should be reported under both approaches and if so, with which approach the total carbon footprint should be calculated and presented.

BC285. Cluster 2 discussed whether undertakings should also have the opportunity to report on an optional basis the past achievements on the Scope 1 and 2 GHG emission reduction in absolute and intensity terms. 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.

BC286. Finally, undertakings should disclose Scope 1 and 2 GHG emissions also in intensity terms to allow for a better comparison over time independently from increases or decreases in production volume or service provision (see "Energy Intensity & Carbon Intensity" section).

BC287. The following tables are a possibility to present the abovementioned information.



Absolute value

Scopes 1 and 2 emissions in absolute value	Retrospective					Milestones and target years		
	Base year 2015-2022	N-2	N-1	N	% N/ N-1	2025	2030	Annual % Target/Base Year
Scope 1								
Total carbon emissions Scope 1 (tCO2e) (1)								
Share capped by regulated emission trading schemes (%)								
Scope 2								
Total carbon emissions Scope 2 (tCO2e, location-based) (2)								
Total carbon emissions Scope 2 (tCO2e, market-based)								
Total GhG emissions Scopes 1&2 (tCO2e) (1) + (2)								

Absolute and intensity terms

Optional: Scopes 1 and 2 emissions in absolute and intensity terms	Past achievements	
	Initial base year	% reduction achieved until the new base year
Scope 1		
Total carbon emissions Scope 1 (tCO2e) (1)		
Scope 2		
Total carbon emissions Scope 2 (tCO2e) (2)		
Total GhG emissions Scopes 1&2 (tCO2e) (1) + (2)		

Proposed disclosure of Scope 3 GHG emissions

BC288. Undertakings should disclose Scope 3 GHG emissions from significant categories in absolute value over the past three years and in relation to a base year.

BC289. 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 should be taken into account. With regard to the quantitative significance of total Scope 3 emissions, TCFD refers to a 40% threshold and the SBTi[163] 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". Cluster 2 considers that undertakings should identify the categories of Scope 3 with the highest emissions that cover at least 80% of total Scope 3 emissions. The proposed 80% is a benchmark, not a threshold, which can be further discussed. A benchmark in absolute value could also be defined.

BC290. Companies would be required to justify their selection of significant categories of Scope 3 GHG emissions, for example through a detailed company-specific analysis or based on sector benchmarks. They are also expected to specify the references used, the key assumptions (e.g. perimeters, emissions factors) and the degree of uncertainty of the main sources of Scope 3 GHG emissions.

BC291. For this, undertakings could rely on the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard[164] and Annex H of ISO 14064-1:2018[165] that provide criteria for determining relevance. Whatever the decision is, companies should explain any

[163] SBTi, "Corporate Manual", 2021. Available here.

[164] GHG Protocol, "Corporate Value Chain (Scope 3) Accounting and Reporting Standard. Available here.

[165] 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.

excluded categories in their Scope 3 GHG emissions disclosure. When SMEs are part of the value chain, companies are encouraged to support them in providing the required information.

BC292. From a practical point of view and for purpose of presentation, Cluster 2 considers it 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) business 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". Business travels and financial investments reflect the respective GHG Protocol category.

BC293. Cluster 2 considers that the annual disclosure of the significant categories' estimates should be based upon a three-year detailed assessment as Scope 3 emissions are estimates based on external data that are difficult to collect. However, the three-year detailed assessment should be updated on a more regular basis in the event of major intermediary evolution.

BC294. Finally, all undertakings or only those from high GHG-emission sectors (still to be discussed) should disclose Scope 3 GHG emissions in intensity terms to allow for a better comparison over time independently from increases or decreases in production volume or service provision (see "Energy Intensity & Carbon Intensity" section).

BC295. The following table is a possibility to present the abovementioned information.

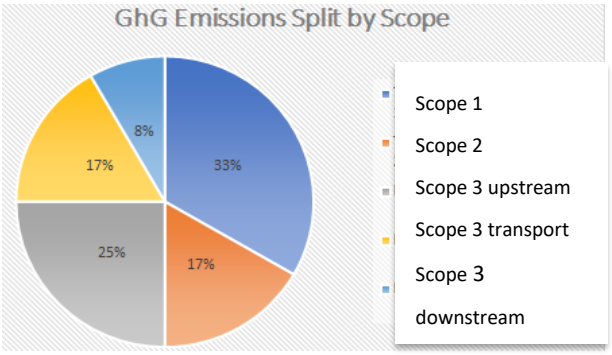
	Retrospective					Milestones and target years		
Material categories of Scope 3 emissions in absolute value (tCO2e)	Base year 2015-2022	N-2	N-1	N	% N/ N-1	2025	2030	Annual % Target/Base Year
From upstream purchasing*								
From downstream sold products*								
From goods transportation*								
Business travels								
From financial investments if any								
Total GhG emissions Scope 3 (tCO2e)								

166

Proposed disclosure of GHG emissions in absolute value split by Scope 1, 2 and material categories of Scope 3

BC296. Undertakings should present the split of GHG emissions by Scope 1, 2 and significant categories of Scope 3 in a diagram. The purpose of the diagram is to provide a representation of the total carbon footprint of undertakings and where in the value chain significant GHG emissions are located. Cluster 2 is aware that a pie diagram shown below is only one possible form of presentation and may be replaced by better ways to present the elements of an undertaking's total carbon footprint.

166 * Upstream purchasing = goods, capital goods, waste disposal, leased assets; downstream sold products = use, end of life, clients transport, leased assets, franchise; goods transportation = tier 1 upstream and downstream, paid or not.



Proposed disclosure of GHG emissions breakdown if relevant

BC297. Cluster 2 considers that for some undertakings, especially those that perform a variety of economic activities and are active in various countries, a breakdown of the GHG emissions can significantly support the relevance und usefulness of the information. It is therefore proposed that, in line with GRI 305, that undertakings can report a breakdown of Scope 1 and 2 GHG emissions by country or region (e.g. the 5 to 10 highest contributions) and economic activity (also supporting the reporting on carbon intensity).

BC298. For Scope 3 emissions, the breakdowns by GHG emission source (Scope 3 categories is mandatory, see above) and by business activity (for intensity analysis) are deemed most relevant. A reporting by country may be considered. In contrast, disclosing Scope 3 emissions by business unit, subsidiary or facility levels does not seem useful.

BC299.

Proposed optional disclosure of removals

BC300. Undertakings should be able to provide transparency on the quantity of GHG removals[167] that relate to their own operations. The removals should come from GHG sources or sinks that sit inside organisational boundaries and that are owned or controlled by the organisation.

BC301. Cluster 2 considers that accounting standards for GHG removals have not yet reached sufficient maturity but is aware of an ongoing project to develop a Greenhouse Gas Protocol guidance on accounting for land sector activities and CO_2 removals in corporate greenhouse gas inventories.[168] Undertakings that want to report on GHG removals should therefore be required to describe technological details, calculation assumptions and methodology to quantify such removals.

BC302. Information on GHG removals may also be presented over the last three years and in relation to a base year.

[167] Removals are defined in the GHG protocol as the absorption or sequestration of GHG from the atmosphere.

[168] GHG Protocol, "Update on Greenhouse Gas Protocol Carbon Removals and Land Sector Initiative", 2021. Available here.

GhG removals, offsets and avoided emissions in absolute value	Base year 2015-2022	N-2	N-1	N	% N/N-1
Removals					
Total Removals (inside the company) (tCO2e)					
Describe technological details, calculation assumptions and methodology.	Narrative				
Offsets					
Total sold verified carbon offsets (outside the company) (tCO2e)					
Total purchased verified carbon offsets emissions (tCO2e)					
Provide details on the quality standards that the voluntary carbon offsets fulfil.	Narrative				
Scope 3 avoided emissions					
Total Scope 3 avoided emissions* thanks to products or services allowing GHG emission reduction for customers (tCO2e)					
Provide details on the calculation methodology, in particular on the life-cycle emissions included and the assumptions made for determining additionality.	Narrative				

Proposed optional disclosure of offsets

BC303. Since it is not possible for most undertakings to eliminate all GHG emissions associated with their activities, products and services right away, an increasing amount of undertakings is using carbon offset credits from external GHG reduction projects with the aim to balance or compensate their GHG emissions. Cluster 2 observes this trend in market practice with caution. Cluster 2 stresses that carbon offsets that do not fulfill stringent quality criteria are a source for greenwashing and that reporting on offsets must not lead to disguising the need for GHG reductions in the undertaking's own operations and value chain.

BC304. Undertakings could report information on offsets that have been purchased or developed outside their GHG emissions inventory boundary, subdivided by GHG storage/removals and emissions reduction projects.

BC305. Undertakings could also report information on reductions at sources inside the inventory boundary that have been sold/transferred as offsets to a third party.

BC306. If an undertaking intends to report on offsets, it should specify if the offsets are externally verified or certified and/or approved by an external programme (e.g., the Clean Development Mechanism, Joint Implementation) und should provide details on the quality standards that the voluntary carbon offsets fulfil.[169]

BC307. Offsets should not be included in the GHG inventory but may be reported separately as "Additional Climate-related Information". Consequently, carbon offsets should not be subtracted from the total carbon footprint (GHG inventory) of an undertaking to disguise the amount of GHG emissions. Offsets should not be reported as to fulfil a GHG reduction target.

Proposed optional disclosure of avoided emissions

BC308. Undertakings could also report on avoided GHG emissions from the application of their products or services. Reporting on avoided emissions needs to rely on a project or product accounting methodology.

BC309. ISO 14064 defines avoided emissions as ''GHG emission reduction that occurs outside the organizational boundaries of the reporting organization as a direct consequence of changes in the organization's activity, including but not necessarily limited to the emission

[169] 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.

reductions associated with increases in the generation and sale of electricity, steam, hot water or chilled water produced from energy sources that emit fewer greenhouse gases per unit than other competing sources of these forms of distributed energy.

BC310. Cluster 2 observes that there is currently no generally accepted methodology to quantify avoided emissions and therefore suggest that an undertaking reporting should 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

BC311. Any estimates of avoided emissions must be reported separately from a company's Scope 1, Scope 2, and Scope 3 GHG emissions, rather than included or deducted from the Scope 3 inventory.

How to disclose?

[To be developed]

Definitions

BC312. It is customary to break down companies' GHG emissions in three scopes. The scopes are thoroughly defined in the GHG Protocol[170] and ISO 14064-1[171] which have become internationally accepted standards. Both methodologies explain the principles and requirements at the organisation level for quantification and reporting of GHG emissions and removals.

BC313. Scope 1 refers to direct emissions of GHG from sources the company owns or controls and removals (see removals specific definition below). "Direct GHG emissions and removals occur from GHG sources or sinks inside organisational boundaries and that are owned or controlled by the organisation. Those sources can be stationary (e.g. heaters, electricity generators, industrial process) or mobile (e.g. vehicles)" (ISO definition).

These emissions result from:

i. the generation of electricity, heat or steam by fuel combustion in stationary source, e.g., boilers, furnaces and turbines.

ii. Manufacturing or processing of chemicals and materials, e.g., cement, aluminium, adipic acid, ammonia manufacture and waste processing.

iii. Transportation of materials, products, waste and employees, where the vehicle used uses fuel combustion, in company owned or controlled, mobile vehicles.

iv. Fugitive emissions from intentional or unintentional releases, e.g., leaks from joints, seals, packing and gaskets; methane emissions from coal mines and venting, hydrofluorocarbon emissions from refrigeration and cooling equipment; methane leakages from gas transport.

These emissions are termed Scope 1 and are considered a direct emissions source, because the emissions are a consequence of activities the reporting organisation itself controls. Thus, Scope 1 emissions are a direct consequence of the way in which the reporting company chooses to organise processes related to i-iv above.

BC314. Scope 2 refers to indirect GHG emissions from consumption of purchased electricity, heat, steam and cooling or indirect GHG emissions from imported energy. This indicator ensures undertakings are measuring emissions from purchased or acquired energy. Energy related GHG emissions represents one of the largest sources of GhG emissions globally. Energy consumers have significant opportunities to reduce those emissions by reducing electricity demand, and increasingly play a role in shifting energy supply to alternative low-carbon resources.

[170] GHG Protocol. Available here.

[171] ISO 14064-1:2018. Available here.

These emissions are termed Scope 2 and are considered an indirect emissions source, because the emissions are a consequence of activities of the reporting organisation but actually occur at sources owned or controlled by another organisation (an electricity generator or utility). Scope 2 accounts for GHG emissions from the generation of purchased energy consumed by the company. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organisational boundary of the company. Scope 2 emissions physically occur at the facility where electricity is generated.

BC315. Scope 3 refers to all other indirect emissions which are not covered in Scope 2 that occur in the value chain of the reporting company, including both upstream and downstream emissions. To define its other indirect emissions, here as well the organisation can follow the GHG protocol and the ISO 14064.

BC316. In the GHG protocol, a company can use the following upstream and downstream categories and activities from the GhG Protocol Corporate Value Chain Standard.

Upstream or downstream	Scope 3 category
Upstream scope 3 emissions	**1.** Purchased goods and services **2.** Capital goods **3.** Fuel- and energy-related activities (not included in scope 1 or scope 2) **4.** Upstream transportation and distribution **5.** Waste generated in operations **6.** Business travel **7.** Employee commuting **8.** Upstream leased assets
Downstream scope 3 emissions	**9.** Downstream transportation and distribution **10.** Processing of sold products **11.** Use of sold products **12.** End-of-life treatment of sold products **13.** Downstream leased assets **14.** Franchises **15.** Investments

In the ISO 14064, GHG indirect emissions are defined as:

- *Indirect GhG emissions from transportation,*
    - *i. Emissions from upstream transport and distribution for goods, which are emissions from freight services that are paid for by the organisation.*
    - *ii. Emissions from downstream transport and distribution for goods are emissions from freight services that are due to the first purchasers or other purchasers throughout the supply chain but not paid for by the organisation.*
    - *iii. Emissions from employee commuting, including emissions related to the transportation of employees from their homes to their workplaces. Telecommuting may incur a greater use of energy for heating or cooling from part of the employee's energy consumption at home and thus could be considered in this subcategory.*
    - *iv. Emissions from client and visitor transport, including emissions associated with the travel of clients and visitors to the reporting company's facility.*
    - *v. Emissions from business travel mainly due to fuel burnt in mobile sources of combustion. Hotel nights might be included when linked to the business travel, i.e. a stay over for flight connections, when attending a conference or for other business purposes. The indirect emissions generated during the journey should also be included, if such data are available and significant.*
- *Indirect GHG emissions from products used by an organisation,*

i. *Emissions from purchased goods, which are emissions associated with the fabrication of the product*

ii. *Emissions from capital goods are emissions from goods that are purchased and amortised by the organisation. This includes goods used by the organisation to manufacture a product, provide a service, or sell, store and deliver merchandise.*

iii. *Emissions from the disposal of solid and liquid waste depend upon the characteristics of waste and its treatment.*

- *Indirect GHG emissions associated with the use of products from the organisation*

i. *Emissions or removals from the use stage of the product include the total expected lifetime emissions from all relevant products sold. The emissions from this subcategory are very closely linked to the life stage scenarios.*

ii. *Emissions from end of life stage of the product include the emissions associated with the end of life of all products sold by the reporting organisation in the reporting year.*

iii. *Emissions from investments are mainly targeting private or public financial institutions. Emissions could result from four types of operations: equity debt, investment debt, project finance and others.*

- *Indirect GHG emissions from other sources.*

  The purpose of this category is to capture any organisation specific emission (or removal) that cannot be reported in any other category. In consequence, it is the organisation's responsibility to define the content of this particular category.

BC317. The GHG Protocol defines offsets as "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."

BC318. GHG offsets can be converted into GHG credits when used to meet an externally imposed target. A GHG credit is a convertible and transferable instrument usually bestowed by a GHG program, e.g., any voluntary or mandatory international, national, sub-national, government or non-governmental authority that registers, certifies, or regulates GhG emissions or removals outside the company.

BC319. Removals are defined in the GHG protocol as the absorption or sequestration of GHGs from the atmosphere. The considered removals should also come from GHG sources or sinks inside organisational boundaries and that are owned or controlled by the organisation, therefore being classified as Scope 1 in the ISO definition. They often refer to land use, land use change and forestry (LULUCF), which covers all GHGs, from living biomass to organic matter in soils.

BC320. According to IPCC guidelines, LULUCF emissions and removals can be assessed in six main land-use categories (forest land, cropland, grassland, wetland, settlement, other land) and several carbon reservoirs (living above-ground biomass, living underground biomass, deadwood, leaf litter, soil organic matter). A change in carbon stock can occur when land use change from one category to another (e.g. converting forest to crop land) or within a land use category (e.g. converting a natural forest to a managed forest, converting from till to no-till). Removals occur when there is an increase of carbon stock in the reservoirs. Emissions occur when there is a decrease and when N_2O is emitted. Options for quantification methodologies: CO_2e emissions associated with LULUCF occur after actions have been undertaken which generate differences in carbon stocks. The period of time after this action is generally set as 20 years. Thus, organisations may quantify either all emissions associated with the action (total carbon stock differences) or annual emissions (1/20 of total carbon stocks differences). If the second option is chosen, emissions should be reported "each time" during a 20-year period.

BC321. According to ISO TR 14069 (under revision) informative annex, an avoided emission is a GHG emission that has not occurred. It is defined by the difference between the level of GHG emissions induced by the reporting organisation's activity outside its organisational

boundaries and the level of GHG emissions of a reference, counterfactual scenario that would have happened otherwise. It may be particularly relevant for certain sectors, e.g. for providers of low carbon technology (cf. Taxonomy climate delegated act, "Manufacture of other low carbon technologies"). Given the complexity of assessing the emissions in a relevant and standardised way, avoided emissions may be reported separately as "Additional Environmental Information".

Perimeter

BC322. Scope 1 and Scope 2 emissions should be calculated and presented at a consolidated level for the reporting entity. Subject to the Level of reporting and Boundaries Guidelines under development by Cluster 1, Cluster 2 considers in principle that consolidation should be done in accordance with the approach with which the entity consolidates its financial reporting data. This follows the line of the "financial control" approach defined by the GHG Protocol, and the approach published by the CDSB described in REQ-07, "Organisational boundary".

BC323. Insofar as the reporting entity leases assets, operates franchises, outsources activities or in other ways utilise assets that are not owned by the entity but are controlled by it, the entity's Scope 1 and Scope 2 calculations, respectively, should encompass emissions stemming from such contractual arrangements. Only if the selected consolidation approach does not apply to such assets should the emissions pertaining to them not be classified as Scope 1 or Scope 2 emissions.

BC324. Scope 3 emissions exceed the organisational boundaries and relate to an undertaking's whole value chain.

Calculation methods (GHG emissions)

BC325. The emissions should include all the seven GHG emissions listed in the Kyoto Protocol (CO_2, CH_4, N_2O, HFCs, PCFs, $SF_6$and NF_3. Biogenic GHG emissions are reported separately in metric tonnes of CO_2 e.

BC326. Measuring Scope 1: Reporting entities must measure Scope 1 GHG emissions by converting data on purchases, internal production processes and other entity specific data into emission data, using relevant GHG emission factors. Reporting entities with installations that are part of the EU-ETS shall include in their Scope 1 reporting the emissions from these installations, measured in accordance with the Monitoring and Reporting Regulation (2018/2066/EU). This requirement would contribute to consistency with EU regulations but may raise timing issues for data availability as ETS-emission reports for a calendar year need to be verified and submitted by 31st of March of the following year.

BC327. Measuring Scope 2: Guidance on how to report Scope 2 GHG emissions are provided by GHG Protocol Corporate Accounting and Reporting Standard and GHG Protocol Scope 2 Guidance. The GHG Protocol requires organisations to quantify emissions from the generation of acquired and consumed electricity.

BC328. Measuring Scope 2 raises the question of reporting in a location-based vs. a market-based manner; Undertakings are required to disclose gross location-based energy indirect (Scope 2) GHG emissions in metric tonnes of CO_2 equivalent based on statistics such as local or national grid emission factors. When the reporting entity has any operations in markets providing product or supplier-specific data in the form of contractual instruments (eligibility as defined in GHG Protocol Scope 2 Guidance), it can disclose gross market-based energy indirect (Scope 2) GHG emissions in metric tonnes of CO_2 equivalent. Companies may also have established GHG emission reduction targets based on the market-based methodology. In those cases, it is consistent to report also Scope 2 GHG emissions as market-based. The methods used to calculate and report Scope 2 emissions critically impact how a company assesses its performance and what mitigation actions are incentivised. To calculate scope 2 emissions, the GHG Protocol recommends multiplying activity data (MWhs of electricity consumption) by source and supplier-specific emission factors to arrive at the total GHG emissions impact of electricity use. It also emphasises the role of green power programmes in reducing emissions from electricity use.

BC329. Boundaries: Companies need to define upstream and downstream activities which are relevant for Scope 3 GHG emissions. The company can use the upstream and downstream categories and activities from the GHG Protocol Corporate Value Chain Standard or ISO 14064-1. For each of these categories and activities, the company can provide a figure in CO_2 equivalent or explain why certain data are not included. Companies should not exclude any activity that would compromise the relevance of the reported Scope 3 GHG emissions inventory. The GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard and Annex H of ISO 14064-1:2018 provide criteria for determining relevance. For each indirect emissions category, the company should identify and evaluate indirect emissions as a screening step without detailed calculation. The companies should evaluate the significance of indirect emissions, considering the magnitude of the indirect emissions or removals, the level of influence to which the organisation has the ability to monitor and reduce emission and removals, the organisation exposure to risks and opportunities. Companies should strive for completeness, but it is acknowledged that accounting for all scope 3 emissions may not be feasible. Some categories may not be applicable to all companies. Companies should justify any excluded categories in their Scope 3 GHG emissions disclosure. When SMEs are part of the value chain, companies are encouraged to support them in providing the required information.

BC330. Companies should disclose the remaining absolute emissions reduction if they don't achieve their defined targets.

Energy Intensity & Carbon Intensity

Why disclosing on Energy Intensity and Carbon Intensity?

Background

BC331. The concepts of "energy efficiency" and "energy intensity" should be clearly distinguished. The IPCC specifies that energy efficiency is often described by energy intensity while providing definitions of energy intensity and carbon intensity.

- 'Energy efficiency' is "the ratio of output or useful energy or energy services or other useful physical outputs obtained from a system, conversion process, transmission or storage activity to the input of energy". Most commonly energy efficiency is measured as input energy over a physical or economic unit, i.e., kWh USD-1 (energy intensity), kWh tonne-1. For buildings, it is often measured as kWh m-2, and for vehicles as km liter-1 or liter km-1.
- 'Energy intensity' describes "the ratio of economic output to energy input in economics".
- 'Carbon intensity' is "the amount of emissions of carbon dioxide (CO_2) released per unit of another variable such as gross domestic product (GDP), output energy use or transport".[172]

BC332. The IPCC's Special Report on Global Warming of 1,5°C[173] 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. "Pathways with higher chances of holding warming to below 1.5°C generally show a faster decline in the carbon intensity of electricity by 2030 than pathways that temporarily overshoot 1.5°C". "By 2050, the carbon intensity of electricity should decrease to −92 to +11 gCO2 MJ−1 (minimum–maximum range) from about 140 gCO2 MJ−1 in 2020". And by 2050, average annual investment in energy efficiency should be upscaled by roughly a factor of six compared to 2015.

BC333. 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.

[172] IPCC, "Special Report on Global Warming of 1.5 °C", 2018. Available here.

[173] IPCC, Special Report on Global Warming of 1.5 °C, 2018. Available here.

BC334. The European Commission's proposal for a new Energy Efficiency Directive[174] 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".

BC335. In addition to climate mitigation, energy efficiency is a way to meet social needs. It has been identified as the most effective solution to alleviate energy poverty and to overcome some of the potential negative distributional impacts of pricing measures. The Covid19 crisis stressed the urgency of addressing energy poverty in the European Union with more Europeans struggling to afford access to essential energy, particularly in the context of rising energy costs and unemployment. "Medium-income households might be at increasing risk of facing energy poverty in the near future, since already today the majority of households affected by energy poverty are (lower) middle-income households".

EU legislation and recommendations

BC336. The CSRD-proposal[175] 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, the CSRD-proposal concludes that "energy aspects should be duly considered in sustainability reporting standards, in particular in relation to environmental matters".

BC337. Reducing energy intensity and carbon intensity is primary to achieve the European Green Deal[176] 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.

BC338. The European Climate Law[177] aims to raise the Union's ambition on reducing GHG emissions to at least 55% below 1990 levels by 2030, which is a substantial increase compared to the existing 40% target. The Climate Target Plan proposed by the European Commission is in line with the Paris Agreement's objective to keep the global temperature increase to well below 2°C and pursue efforts to keep it to 1,5°C compared to pre-industrial levels.

BC339. The European Commission's proposal for a new Energy Efficiency Directive[178] in the 'Fit-for-55' Package[179] 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.

BC340. 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

[174] Proposal or a Directive COM/2021/558 of the European Parliament and of the Council on Energy Efficiency. Available here.

[175] 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.

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

[177] 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.

[178] Proposal or a Directive COM/2021/558 of the European Parliament and of the Council on Energy Efficiency. Available here.

[179] 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.

(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".

BC341. The review of the Renewable Energy Directive[180] in the "Fit-for-55" Package sets a GHG intensity reduction target of 13% by 2030 for the transport sector.

BC342. The delegated acts[181] of the Taxonomy Regulation[182] establish the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation. The sectors addressed in the delegated acts are forestry, environmental protection and restoration activities, manufacturing, energy, water supply, sewerage, waste management and remediation, transport, construction and real state and information and communication. Hence, the delegated acts cover economic activities of roughly 40% of EU-domiciled listed companies, in sectors which are responsible for almost 80% of direct GHG emissions in Europe.

- The technical screening criteria may not be relevant to establish the adequate denominator for intensity ratios standards when they are not focused on one particular activity. The sub-sectors covered in the delegated acts of the Taxonomy Regulation are correlated with NACE codes. But each taxonomy's sub-sector includes several NACE codes covering different economic realities. For instance, "Anaerobic digestion of sewage sludge" includes E37.00, F42.99 NACE sectors, respectively for "Sewerage" and "Construction of other civil engineering projects".
- The technical screening criteria may help establish the adequate denominator for intensity ratios standards when they include an intensity ratio. For instance, the technical screening criteria for "Manufacture of cement" is based on "CO_2e per tonne of grey cement clinker". On the contrary, the technical screening criteria of other sub-sectors is based on other metrics not related to intensity. For instance, the technical screening criteria for "Manufacture of plastics in primary form" is based on the origin of the raw material or on the comparison with manufacture relying on fossil fuel feedstock.

BC343. The SFDR[183] requires financial market participants to disclose "GHG intensity" of investee companies calculated in accordance with the following formula:

$$\sum\left(\frac{\text{current value of investment}_i}{\text{current value of all investments (€M)}} \times \frac{\text{investee company's Scope 1,2 and 3 GHG emissions}_i}{\text{investee company's €M revenue}_i}\right)$$

BC344. The SFDR also requires financial market participants to disclose "Energy consumption intensity", 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.

Global reporting frameworks

BC345. Energy intensity and carbon intensity are disclosures required by reference reporting frameworks. GRI requires organisations to disclose "energy intensity" [184] and "GHG emissions intensity" [185], both indicators based on company specific metrics. UNCTAD ISAR requires

[180] 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.

[181] Implementing and Delegated Acts of the Taxonomy Regulation. Available here.

[182] 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.

[183] 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.

[184] GRI 302: Energy (2016). Available here.

[185] GRI 305: Emissions (2016). Available here.

companies to report GHG emissions intensity per unit of net value added. CDP[186] requires the publication of "emissions intensity" and "energy-related activities" detailing the calculation of some sectors such as cement, chemical production and metals and mining.

BC346. TCFD[187] recommends disclosing assets manager portfolio's exposure to carbon-intensive companies, expressed in tonnes CO_2e / $M revenue. TCFD also recommends that all sectors disclose a target in absolute and/ or intensity based terms. Carbon intensity relates to a company's physical carbon performance and describes the extent to which its business activities are based on carbon usage for a defined scope and fiscal year. GHG emissions considered refer to absolute Scope 1, Scope 2, and relevant, material categories of Scope 3 emissions.

Users' needs

BC347. Improving energy and carbon intensity imply direct benefits to the EU such as protecting the environment, mitigating climate change, improving air quality, reducing the EU's reliance on external suppliers of oil and gas, and decreasing energy costs.

BC348. The disclosure required in relation to the subtopic "Energy intensity" in combination with the subtopic "Energy Consumption & Mix" and the disclosure required in relation to the subtopic "Carbon Intensity" in combination with the subtopic "GHG Emissions" indicate the efficiency of companies, while stressing their exposure and vulnerability to changes in policies and technology aimed at a transition to a low-carbon economy.

BC349. 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). Furthermore, these two intensity sub-topics enable comparability between organisations in the same sector.

Conclusions

BC350. Based on the analysis above, Cluster 2 acknowledges that reporting of energy intensity and carbon intensity is relevant for corporate sustainability reporting as it is central to mitigate climate from an impact and financial materiality perspective.

BC351. Cluster 2 considers that energy intensity should be disclosed per production unit rather than per revenue to increase the quality and relevance of information. However, when energy intensity is calculated based on sector specific metrics such as production units, these ratios are only comparable for companies in the same sector. In this case, Cluster 2 considers that the disclosure of energy intensity per production unit is particularly relevant for the companies belonging to high GHG-emissions sectors – agriculture and forestry, manufacturing, energy including coal, oil & gas power generation, water supply, sewerage, waste management and remediation, transport including aviation, construction and real estate, information and communication (data hosting) – and/or the sectors subject to the EU ETS..

BC352. In addition, Cluster 2 proposes an optional specific disclosure of the energy intensity of buildings for all undertakings in order to be aligned with EU green buildings objectives. This disclosure is relevant for all undertakings whatever the sector as all undertakings are occupying offices.

BC353. Cluster 2 considers that carbon intensity should be composed of two ratios relying on revenue and sectoral production.

BC354. Cluster 2 recommends that the disclosure of carbon intensity per revenue should apply to all companies in order to meet the information needs of financial market participants. The SFDR will require financial market participants to disclose the GHG intensity per revenue of their investee companies. It is therefore necessary that undertakings pursuant to the CSRD report that information through the ESRS. Indeed, Cluster 2 considers that preparers have an

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

[187] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

insight position allowing to finetune the calculation of the GHG intensity ratio per revenue (adjustment of the perimeter for both nominator and denominator) and are better positioned to do this than the investors or analysts themselves.

BC355. Moreover, Cluster 2 argues that the disclosure of carbon intensity per production unit for Scope 1 and 2 GHG emissions should apply to all companies if a relevant denominator exists in order to allow for comparison overtime independently from increases or decreases in production volume or service provision. Cluster 2 discusses whether the disclosure of carbon intensity per production unit for Scope 3 GHG emissions should apply to all companies in order to increase representativeness and comparability or only the companies that are part of high GHG-emission sectors as relevant denominators based on production units do not exist in all sectors (see "Climate Target" section).

BC356. Finally, Cluster 2 proposes an optional disclosure of logistics and tertiary activities carbon intensity in order to address buildings and transport activities whatever the sector and support EU decarbonisation objectives on these 2 activities. These disclosures would apply whatever the sector as all undertakings occupy offices, have their employees travel for business purposes and most of them require owned or outsourced logistics activities for good transportation. The logistics carbon intensity ratio would be expressed in t CO_2e/tonnes of goods transported (owned or outsourced, paid or not paid tier 1 transport of goods). The tertiary carbon intensity ratio would cover emissions from occupied buildings and business travels and would be expressed in kg CO_2e/FTE. These carbon intensity ratios may be more relevant for low emissions sectors and should be more developed under Sector specific requirements.

BC357. "Energy intensity" should be reported under "Energy Consumption & Mix" section, whereas "Carbon intensity" should be reported under "GHG emissions".

What to disclose?

Proposed disclosure of energy intensity per activity in the "Energy Consumption & Mix" section

BC358. Cluster 2 considers as a principle that the numerators of intensity ratios should be calculated on the same perimeter 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 business division/unit and the denominator should be adapted to use an activity-specific metric.

BC359. Cluster 2 acknowledges that the disclosure of energy intensity ratios per revenue certainly foster comparability on one hand but is not the most relevant and reliable indicator for non-financial sectors for the below reasons on the other hand:

- It may be less environmentally robust due to the volatility of economic metrics and method reliance on idealised conditions.
- It may not be correlated with emissions tied to physical production processes, especially for sectors with high price fluctuations.
- Target progress can be difficult to track if undertakings experience financial losses in certain years.

BC360. Hence, Cluster 2 recommends that the disclosure of energy intensity should be only composed of ratios relying on sectoral/activity production units in order to increase the quality and relevance of information. Energy intensity per revenue is therefore not recommended.

BC361. Undertakings should disclose its energy intensity as below:

$$\frac{\text{Total final energy consumed during the reporting period excluding feedstock consumption}}{Sector-specific\ metric}$$

BC362. Cluster 2 takes into account that when energy intensity is calculated based on sector specific metrics such as production units, these ratios are only comparable for companies in the same sector. Therefore, Cluster 2 recommends that the disclosure of energy intensity

should apply in priority to the high GHG-emission sectors identified in the Taxonomy Regulation[188], as follows: – agriculture and forestry, manufacturing, energy including coal, oil & gas power generation, water supply, sewerage, waste management and remediation, transport including aviation, construction and real estate, information and communication (data hosting) – and/or the sectors subject to the EU ETS .

BC363. The precise denominators/production units related to these sectors/activities are detailed in the table XX and have been coordinated with the sector specific standards.

BC364. The energy intensity should be presented over the past three years to allow investors and other stakeholders to undertake evolution analysis and monitoring the performance. It should also be accompanied by targets for 2025 and 2030 and, if relevant, every five years from 2030 to 2050 to demonstrate the business modelling effort and level of ambition (see "Climate Policies and Targets" section).

BC365. In addition, Cluster 2 proposes that the disclosure of the energy intensity of buildings/offices (per square meter) should be required for companies in all sectors considering all companies occupy buildings/offices. As stressed by the European Commission's proposal for a new Energy Efficiency Directive[189], buildings are responsible for about 40% of the Union's total energy consumption and for 36% of its GHG from energy, and 75% of the building stock in the EU has a poor energy performance. The revised directive points out that "much of the effort is needed in the field of better insulating buildings", but that "there is also potential in terms of more efficiently supplying the heat or cold needed", providing specific requirements for the building stock for all sectors (see "EU legislation and recommendations").

BC366. The following table is a possibility to present the abovementioned information.

	Retrospective					Milestones and target years		
Activity Energy Intensity	Base year 2015-2022	N-2	N-1	N	% N/N-1	2025	2030	Annual % Target/Base Year
Energy Intensity per activity (kWh/unit of production)								
Offices Energy Intensity	Base year 2015-2022	N-2	N-1	N	% N/N-1	2025 Target	2030 Target	Annual % Target/Base Year
Offices Energy Intensity (kWh/m2)								

Proposed disclosure of carbon intensity in the "GHG Emissions" section

BC367. Cluster 2 considers that the numerators of carbon intensity ratios per revenue should be equal to the ones required in the absolute values of the "GHG Emissions" sub-topic to avoid changes in scope and reconsiderations in calculation and as such ensure coherence between standards. Consequently, the carbon intensity numerator should be exactly the same as the ones reported under "GHG Emissions"

- Total Scope 1 GHG emissions,
- Total Scope 2 GHG emissions,
- Total Scope 3 GHG emissions based on material categories.

BC368. While recognising that the disclosure of intensity ratios per revenue is not the most relevant indicator for non-financial sectors, Cluster 2 takes into account that the disclosure of

[189] Proposal or a Directive COM/2021/558 of the European Parliament and of the Council on Energy Efficiency. Available here.

GHG intensity per revenue is required for financial market participants in accordance with the SFDR[190] as it favours the comparability between sectors.

BC369. Hence, Cluster 2 recommends that the disclosure of carbon intensity should be composed of two ratios, one per revenue, one per sector-specific metric. The first denominator should rely on the revenue in order 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. The second denominator should rely on sectoral production unit in order to meet other stakeholders' needs as it increases the quality and relevance of information.

BC370. Undertakings should disclose its carbon intensity based on two ratios as below.

- $\text{Carbon intensity per revenues} =$

$$= \frac{\text{Scope 1 } + \text{Scope 2} + \text{ Scope 3 GHG emisions (1)}}{Revenues\ (2)}$$

(1) Reported in "GHG emissions" sub-topic

(2) In accordance with financial accounts

- $\text{Carbon intensity per sector} - \text{specific metric} =$

$$= \frac{\text{Scope 1} + \text{ Scope 2} + \text{ Scope 3 GHG emissions (1)}}{Sector\ -specific\ metric}$$

(1) Reported in "GHG emissions" sub-topic and split by activity to match denominator's perimeter

BC371. As a principle, numerators of carbon intensity per sector-specific metric should be calculated on the same perimeter as the denominators for consistency reasons. This means that the absolute values of the "GHG Emissions" 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. Carbon intensity should therefore be disclosed broken down by activity or business division/unit and the denominator should be adapted to use an activity-specific metric.

BC372. Cluster 2 recommends that the disclosure of carbon intensity per revenue should apply to all sectors. The SFDR will require financial market participants to disclose the GHG intensity per revenue of their investee companies. It is therefore necessary that undertakings pursuant to the CSRD report that information through the ESRS.

BC373. Cluster 2 argues that the disclosure of carbon intensity per production unit for Scope 1 and 2 GHG emissions should apply to all companies in order to allow for comparison of GHG emissions overtime independently from increases or decreases in production volume or service provision.

BC374. Cluster 2 argues that the disclosure of carbon intensity per production unit for Scope 3 GHG emissions should apply to all companies in order to increase representativeness and comparability or only to the companies that are part of high GHG-emission sectors identified in the Taxonomy Regulation, as follows: agriculture and forestry, manufacturing, energy including coal, oil & gas power generation, water supply, sewerage, waste management and remediation, transport including aviation, construction and real estate, information and communication (data hosting) – and/or the sectors subject to the EU ETS, because denominators based on production units are mainly comparable for companies operating in these sectors.

BC375. Both carbon intensity ratios should be presented over the past three years to allow investors and other stakeholders to undertake evolution analysis and monitor the performance. They should also be accompanied by targets for 2025 and 2030 and, if relevant, every five years from 2030 to 2050 to demonstrate the business modelling effort and level of ambition (see "Climate Policies and Targets" section).

BC376. The following tables are a possibility to present the abovementioned information.

[190] 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.

		Retrospective					Milestones and target years		
Intensity terms	Scopes 1 and 2 emissions in intensity terms	Base year 2015-2022	N-2	N-1	N	% N/ N-1	2025	2030	Annual % Target/Base Year
	Scope 1								
	Total carbon emissions Scope 1 (tCO2e/production unit) (1)								
	Scope 2								
	Total carbon emissions Scope 2 (tCO2e/production unit) (2)								
	Total GhG emissions Scopes 1&2 (tCO2e/production unit) (1) + (2)								

	Retrospective					Milestones and target years		
Material categories of Scope 3 emissions in intensity terms	Base year 2015-2022	N-2	N-1	N	% N/N-1	2025	2030	Annual % Target/Base Year
Scope 3 material categories (tCO2e/production unit)								

BC377. Additionally, Cluster 2 recommends the optional disclosure of carbon intensity per full time equivalent staff (FTE) covering buildings/offices and business travels of all companies in order to address the carbon intensity of tertiary activities whatever the sector. This ratio will divide the GHG emissions from offices' heating and cooling as well as from business travels by the number of FTE. This disclosure will support the EU energy efficiency policy for buildings and for transportation. Thresholds should be defined to apply this disclosure requirement and the sector specific standard should finetune the requirement. This type of disclosure would be probably more relevant for low emissions sectors.

BC378. Similarly, Cluster 2 recommends the optional disclosure of carbon intensity per tonnes of good transported covering logistics activities of all companies to address the carbon intensity of logistics. This ratio will divide the GHG emissions from freight services (tier 1) that are paid for by the organisation (or not paid in some case) by the tonnes of goods transported. This disclosure will support the EU transportation decarbonisation policy by increasing the transparency of upstream (supply) and downstream (distribution of goods) transport-related emissions. Thresholds should be defined to apply this disclosure requirement and sector specific standards should finetune the requirement.

	Retrospective					Milestones and target years		
Carbon Intensity per Revenue	N-2	N-1	N					
GHG emissions Scopes 1, 2 & significant categories of Scope 3 /M€ Revenues (tCO2e/M€)								
Carbon Intensity of Tertiary activities	Base year 2015-2022	N-2	N-1	N	% N/N-1	2025 Target	2030 Target	Annual % Target/Base Year
Offices and business travels GHG emissions/Full-time equivalent (kgCO2e/FTE)								
Logistics Carbon Intensity	Base year 2015-2022	N-2	N-1	N	% N/N-1	2025 Target	2030 Target	Annual % Target/Base Year
GHG emissions from transportation of goods (tCO2e/tons of goods transported)								

How to disclose?

[To be developed]

Definitions

BC379. Energy intensity expresses the total final energy consumed during the reporting period, excluding feedstock consumption, per unit of activity, output or any other sector-specific and activity-specific metrics.

BC380. Carbon intensity expresses the amount of GHG emissions per revenue, unit of activity, output or any other sector-specific metric.

Perimeter

BC381. Numerator and denominators in the formula of the KPIs for energy intensity and carbon intensity should cover the same perimeter of activities and the same period of reporting.

Calculation methods (Energy Intensity per Sector)

BC382. The nominator in the formula of the KPI for energy intensity should derive from the one reported in the "Energy Consumption & Mix" sub-topic's KPIs. It should potentially be split by activity to match the denominator's perimeter.

BC383. The denominators in the formula of the KPI for energy intensity should depend on the sector and the entity in order to provide a relevant intensity ratio. See sector-specific standards for more details on sector-specific denominator.

BC384. Sector-specific denominators that should be used to calculate energy intensity are indicated in table xx for top carbon-intensive sectors.

BC385. If a company considers that the denominator indicated for its sector in table xx does not fit with the specificities of the company itself, it should use a denominator that better describes the company activity and explain the rationale for how it chose that denominator. The denominator shall be comparable with other activities from the same sector. As an example, the ICAO CO_2 emissions standard for aircraft or International Maritime Organisation (IMO) Energy Efficiency Design Index (EEDI) should not be used as they don't allow comparability with other transport modes.

Calculation methods (Carbon Intensity per Revenue)

BC386. *The nominator in the formula for carbon intensity per revenue should correspond to the one reported in the "GHG emissions #1,2 & 3" sub-topic's KPIs:*

- *Total Scope 1 GHG emissions,*
- *Total Scope 2 GHG emissions,*
- *Total Scope 3 GHG emissions based on material categories.*

BC387. *The denominators in the formula of the carbon intensity KPIs should depend on the sector and the entity in order to provide a relevant intensity ratio. See sector-specific standards for more details.*

Calculation methods (Carbon Intensity per Sector-specific Metrics)

BC388. *The nominator for Carbon intensity per sector-specific metrics should derive from the one reported in the "GHG emissions #1,2 & 3" sub-topic's KPIs. It should potentially be split by activity to match with the denominator' perimeter of activities.*

BC389. *Sector-specific denominators used to calculate intensity ratios should be adapted depending on the sector and the entity to provide relevant information.*

BC390. *In general terms, the denominator used to calculate intensity ratios should be based on intensity ratios set in EU legislation such as the Taxonomy Regulation[191] or any other documentation generated by reference of international sectoral initiatives. Common denominators include number of employees, energy production, kilometres travelled, or tonnes transported, unit of production, number of occupants or square area.*

BC391. *Sector-specific denominators that should be used to calculate carbon intensity are indicated in table xx for top carbon-intensive sectors.*

BC392. *If undertakings consider that the denominator indicated for its sector in table xx does not fit with the specificities of the company itself, it should use a denominator that better describes the company activity and explain the rationale for how it chose that denominator.*

Sources of information

BC393. The Taxonomy Regulation[192] should be used as a reference source of information when establishing denominators for the calculation of intensity ratios. However, it should not be considered as reliable for all sub-sectors/activities.

BC394. In addition, reference international sectoral initiatives should be consulted/engaged when requiring companies to disclose sector-specific intensity metrics.

Carbon Pricing

Why disclosing on Carbon Pricing?

Background

BC395. As regulation of carbon emissions increases around the world through emissions trading schemes and/or taxes, organisations are implementing internal carbon pricing in anticipation of policies within their own countries of operation. In many jurisdictions, implicit carbon pricing signals are also arising from changing technological, regulatory and market dynamics – for example, energy efficiency standards and support for renewable energy, as well as shifts in supply and demand for low-carbon commodities, products and services. These factors, combined with policies, signal the present and future cost of carbon. Leading companies have started to calculate and internalise this cost using an internal carbon price as a proxy for a broader set of transition risks.[193]

BC396. Carbon pricing is an instrument that captures the external costs of GHG emissions. Carbon prices are an essential element for analysing and assessing financial impacts, such as those affecting the valuation of an organisation's key assets and potential changes in input and output prices and provide investors and data users with an understanding of whether key assumptions in an organisation's risk and opportunity assessment are reasonable. Carbon prices are also relevant to control the volume and incentivise the reductions of GHG emissions.

BC397. An internal carbon price (or a range of prices) can drive the transformation to a low-emission business model. Internal carbon prices increase awareness and help companies prepare for potential forthcoming carbon pricing regulations. Carbon emissions are counted as costs, giving an advantage to projects with relatively low emissions. This tool facilitates the

[191] 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.

[192] 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.

[193] ECOFYS, Generation Foundation and CDP, "How-to Guide to Corporate Internal Carbon Pricing", 2017. Available here.

inclusion of climate risk in decision-making and anticipates regulatory changes that could affect the future profitability of companies. Two main types of internal carbon prices can be distinguished: shadow prices and internal carbon fees. In the carbon shadow pricing model, a company determines the hypothetical costs per metric tonne CO_2 and uses it in decision-making, such as in capital expenditures. An internal carbon fee is directly charged to individual business units for every emitted tonne CO_2, thus directly affecting the profit and losses of the business unit concerned.

BC398. Internal carbon pricing is mostly used by organisations:

1. to assess transition risks by estimating the potential climate-related financial impacts of their current and future GHG emissions that could arise from stricter climate policy and regulation. In this regard, internal carbon prices can take the form of a range of estimates for scenario analysis.
2. as an internal management tool to incentivise GHG reductions, by introduction of a "shadow price" or an internal carbon fee. This allows an organisation to integrate the GHG emissions of its activities in decision-making and guide investment in low-carbon alternatives.

BC399. Several different methods can be distinguished to define an internal carbon price. A damage cost approach is based on damages caused by the emission of a tonne of CO_2, the rational being the internalisation of external costs. This approach could be useful in terms of impact materiality, as an upper price range for a transition risk assessment and for awareness raising. An avoidance cost approach is based on the company's internal costs to reduce an average tonne of CO_2, the rationale being the use of the carbon price as a management tool for cost-effective GHG reductions to achieve the company's climate targets. An alignment with a 1.5 or 2°C approach uses an externally determined carbon price necessary to reach global climate goals. An extended carbon price approach means applying an existing market carbon price on non-regulated business activities.

EU legislation and recommendations

BC400. External carbon prices are set by regulatory emission trading schemes, carbon taxes or other carbon pricing mechanism. An emissions trading system (ETS) is a system where emitters can trade emission units to meet their emission targets. To comply with their emission targets at least cost, regulated entities can either implement internal abatement measures or acquire emission units in the carbon market, depending on the relative costs of these options. By creating supply and demand for emissions units, an ETS establishes a market price for GHG emissions. EU ETS works as a cap and trade principle. A cap is set on the total amount of certain GHGs that can be emitted by the installations covered by the system. The cap is reduced over time so that total emissions fall. Within the cap, installations buy or receive emissions allowances, which they can trade with one another as needed. The limit on the total number of allowances available ensures that they have a value. A carbon tax directly sets a price on carbon by defining an explicit tax rate on GHG emissions or on the carbon content of fossil fuels, i.e. a price per t CO_2e. It is different from an ETS in that the emission reduction outcome of a carbon tax is not pre-defined, but the carbon price is.[194]

BC401. As an indication of current external prices, current carbon tax range between 30 to 100€/tCO_2e, current ETS/Cap&Trade range between 5 to 60€/t CO_2e. As an indication of internal prices set by global companies, shadow carbon prices applied to CapEx decision making range between 5 to 60€/t CO_2e whereas shadow prices applied to R&D investment decision making may be higher (50 to 200€/t) due to the longer term of such investment. These indicative figures are sourced from experts' discussions.

Global reporting frameworks

BC402. TCFD recommends disclosure of external and internal carbon prices. The rationale is that carbon pricing has emerged as a critical forward-looking metric that can help organisations

[194] EU's Emissions Trading System. Available here.

manage climate-related transition risks and opportunities, as an incentive to drive energy efficiencies to reduce costs, and to guide capital investment decisions.

BC403. Based on TCFD's 2021 consultation[195], 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.

BC404. CDP has developed one scenario analysis framework called the Carbon Pricing Corridors[196], 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.

Users' needs

BC405. Cluster 2 considers that carbon prices are an essential element for users when analysing and assessing financial impacts, such as those affecting the valuation of an organisation's key assets and potential changes in input and output prices. In such view, carbon prices provide investors and data users with an understanding of whether key assumptions in an organisation's risk and opportunity assessment are reasonable. Moreover, given that users are demanding transparency on the reduction of GHG emissions, providing them with a disclosure of carbon prices which are relevant to control the volume and incentivise the reductions of GHG emissions seems legitimate.

Conclusions

BC406. Based on the above, Cluster 2 considers that reporting on external carbon pricing is an important part of the ESRS on climate change mitigation from the financial materiality perspective.

BC407. External carbon pricing provides information needed to evaluate transition risks of potential climate-related financial impacts of their current and future GHG emissions and to incentivise GHG emission reductions. Cluster 2 notes that for companies under the EU ETS or having emissions covered by regulatory emission trading or external carbon pricing schemes, the scale of the financial impact may be significant, and the likelihood of the risk will become higher and higher over time. Thus, it should be reported as part of the measurement of financial exposure to transition risks disclosure in the "Financial Exposure to Physical and Transition Risks; Financial Opportunities" section.

BC408. Internal carbon pricing is rather a governance tool which should be reported as part of the internal climate-related incentive mechanism in the "Climate Governance" section.

What to disclose?

Proposed disclosure of external price in the "Financial Exposure to Physical and Transition Risks" section

[195] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

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

BC409. Undertakings should disclose the share of the Scope 1 GHG emissions covered by regulatory emission trading and carbon pricing schemes as detailed in the "GHG Emissions" subtopic in the "Performance Measures" section of this standard.

BC410. Undertakings should also disclose relevant external carbon prices (tax or Cap&Trade) applied to their operations and generating a potential financial effect on the undertaking's financial position and performance. This is further presented under the "Financial Exposure to transition risks" section.

Rationale: *The proposed disclosure of external carbon pricing provides information needed to evaluate transition risks of potential climate-related financial impacts of the undertakings' current and future GHG emissions and to incentivise GHG emission reductions. Cluster 2* considers *important that companies describe the processes for identifying and assessing short-, medium- and long-term transition risks along the value chain, to which external carbon pricing pertains.*

Proposed disclosure of internal price in the "Climate Governance" section

BC411. Undertakings should disclose a description of how internal carbon pricing schemes are implemented in the undertaking as well as a quantitative disclosure of the volumes and prices at stake for the carbon pricing systems used (CapEx shadow price, R&D investment shadow price, internal carbon fee/fund directly affecting the profit and losses of the business units, others).

Rationale: *The proposed disclosure brings transparency to a governance tool to incentivise carbon-reductions. It relies on existing guidance in the TCFD recommendations and 2021 consultation. Cluster 2* considers *important that companies disclose how internal carbon pricing schemes are used to systematically assess carbon-related risks and opportunities and incentivise the reductions of GHG emissions in their operations and in the value chain and describe how the internal carbon price levels are determined and updated.*

How to disclose?

[To be developed]

Definitions

BC412. An internal shadow carbon price is an internally developed estimated cost of carbon emissions, which can be used as a planning tool to help identify revenue opportunities and risks, as an incentive to drive energy efficiencies to reduce costs, and to guide capital investment decisions. In this case, no entry is accounted for in the internal books of the company.

BC413. An internal carbon fee or carbon fund system is defined by the accounting entries that are generated for each internal transaction within the company. These systems are directly affecting the profit and losses of the business units concerned, thus generating stronger behavioural changes.

BC414. Shadow and fee systems are complementary.

Perimeter

BC415. Undertakings should report only external carbon prices relevant to their operations in the markets with carbon pricing schemes.[197]

[197] Carbon Pricing Leadership Coalition, Carbon Pricing and the Task Force on Climate-related Financial Disclosures, 2018. Available here.

BC416. Undertakings should report the extent to which internal pricing systems apply.

Calculation methods

BC417. External carbon prices are reported as euros per tonne of CO_2e per legally binding or voluntary carbon pricing schemes.

BC418. Internal carbon prices are reported as euros per tonne of CO_2e.

EU Taxonomy for Sustainable Activities

Why disclosing on EU Taxonomy for Sustainable Activities?

Background

BC419. The "Taxonomy on Mitigation and Adaptation" subtopic is a placeholder for the disclosure requirements from the Delegated Act supplementing Article 8 of the Taxonomy Regulation[198].

EU legislation and recommendations

BC420. The Taxonomy Regulation[199], together with the NFRD[200] and the SFDR[201], are the central components of the sustainability reporting requirements underpinning the EU's sustainable finance strategy. The purpose of this legal framework is to create a consistent and coherent flow of sustainability information throughout the financial value chain.

BC421. The CSRD-proposal[202] aims to "make sustainability reporting requirements more consistent with the broader sustainable finance legal framework, including (…) the Taxonomy regulation, and to tie in with the objectives of the European Green Deal[203]".

BC422. As summarised in the CSRD-proposal, the Taxonomy Regulation sets up a classification system for environmentally sustainable economic activities, with the objective of scaling up sustainable investments and combatting the greenwashing of 'sustainable' financial products. The text requires companies within the scope of the NFRD[204] to disclose certain indicators about the extent to which their activities are environmentally sustainable according

[198] 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.

[199] 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.

[200] 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.

[201] 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.

[202] 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.

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

[204] 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.

to the taxonomy. The climate disclosure obligations are specified by a separate Commission Delegated Act.

BC423. The Taxonomy Regulation encompasses a standard set of definition for sustainable activities centred on six environmental objectives: Climate Mitigation, Climate adaptation, Water, Circular economy, Pollution and Ecosystem.

BC424. The Taxonomy Regulation establishes four overarching conditions that an economic activity must meet in order to qualify as environmentally sustainable. A qualifying activity must: (i) contribute substantially to one or more of the six environmental objectives; (ii) do no significant harm to any of the other environmental objectives; (iii) be carried out in compliance with minimum (social) safeguards; and (iv) comply with technical screening criteria established by the Commission through delegated acts.

BC425. Delegated Act C(2021) 2800[205] supplements the Taxonomy Regulation by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether an economic activity causes no significant harm to any of the other environmental objectives.

BC426. In order to meet the technical screening criteria, the entity should perform a robust climate risk and vulnerability assessment, which should be proportionate to the scale of the activity and its expected lifespan. Climate projections are differentiated if the expected lifespan of activities is higher or lower than 10 years. An indicative non-exhaustive classification of climate-related hazards is included in Appendix A with the most widespread hazards that are to be taken into account in the climate risk and vulnerability assessment. This classification separates four categories of risks (Temperature-related, Wind-related, Water-related and Solid mass-related) into acute and chronic risks.

BC427. The Taxonomy Regulation requires climate projections and assessment of impacts based on best practice and available guidance. It also takes into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent IPCC's reports, scientific peer-reviewed publications and open source or paying models.

BC428. Article 8(1) of the Taxonomy Regulation requires undertakings subject to the NFRD[206] to disclose information on how and to what extent their activities are associated with environmentally sustainable economic activities. Article 8(2) requires non-financial undertakings to disclose information on the proportion of the turnover, capital expenditure and operating expenditure of their activities related to assets or processes associated with environmentally sustainable economic activities.

BC429. Delegated act C(2021) 4987[207] supplements the Taxonomy Regulation by specifying the content and presentation of information to be disclosed by undertakings and by specifying the methodology to comply with the disclosure obligation. The Delegated Act differentiates the KPIs required for non-financial undertakings, asset managers, credit institutions, investment firms and insurance and reinsurance undertakings and sets out templates to present the required information.

Global reporting frameworks

[205] Commission Delegated Regulation C/2021/2800 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives. Available here.

[206] 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.

[207] Commission Delegated Regulation C/2021/4987 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by specifying the content and presentation of information to be disclosed by undertakings subject to Articles 19a or 29a of Directive 2013/34/EU concerning environmentally sustainable economic activities, and specifying the methodology to comply with that disclosure obligation. Available here.

BC430. TCFD's 2021 consultation[208] proposes two financial metrics without detailing the calculation methods, "proportion of assets and/ or operating, investing, or financing activities aligned toward climate-related opportunities based on key categories of commonly accepted opportunities" and the "amount of expenditure or capital investment deployed toward climate risks and 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[209]. The second one is similar to the proportion of CapEx and OpEx related to assets or processes associated with environmentally sustainable economic activities that is required under the Taxonomy Regulation.

Users' needs

BC431. Stakeholder consultations related to the CSRD-proposal[210] showed that there was strong support for measures to ensure the alignment of NFRD[211]'s sustainability reporting requirements with relevant EU legislation, in particular the Taxonomy Regulation[212].

BC432. The Taxonomy Regulation aims at defining a clear guidance on activities qualifying as contributing to environmental objectives and should help inform professional and individual investors about the investments that fund environmentally sustainable economic activities. Thus, the disclosure of alignment with the Taxonomy Regulation is an information which financial market participants, credit institutions, and insurance undertakings need in order to meet their sustainability reporting obligations established in the EU legislation and especially the Green Asset Ratio described in Article 8 of the Delegated Act.

Conclusions

BC433. Cluster 2 considers that disclosing the contribution of economic activities to climate change mitigation and climate change adaptation contributes to measure potential systemic risks in providing present and forward-looking measurement of the economic activities that really contribute to the European Green Deal in terms of climate objectives.

BC434. In addition, Cluster 2 argues that measuring the alignment of economic activities with climate change mitigation and climate change adaptation gives a valuable information on the climate-related opportunities for undertakings or sustainability data users. In particular, it can assist them in understanding the magnitude of the results of an undertaking action plan to mitigate or adapt to climate change.

BC435. Thus, Cluster 2 ensures that the reporting requirements for undertakings are consistent with the Taxonomy Regulation[213] through the proposed climate reporting standard. It will take into account the indicators that undertakings have to disclose about the extent to which their activities contribute to climate change mitigation and climate change adaptation

[208] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

[209] 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.

[210] 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.

[211] 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.

[212] 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.

[213] 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.

according to the screening criteria and do-no-significant-harm thresholds of the Taxonomy Regulation.

BC436. Therefore, Cluster 2 proposes the following disclosure as a placeholder for disclosure corresponding to the Delegated Act supplementing Article 8 of the Taxonomy Regulation.

What to disclose?

Proposed disclosure of revenues, CapEx and OpEx related to climate change mitigation as per Article 8 of the Taxonomy Regulation

BC437. As required by Article 8(1) of the Taxonomy Regulation[214], undertakings that are subject to Articles 19a or 29a of Directive 2013/34/EU of the European Parliament and of the Council should disclose in their non-financial statement or consolidated non-financial statement information on how and to what extent their activities are associated with environmentally sustainable economic activities 'climate change mitigation'.

BC438. As requested by Article 8(2) of the Taxonomy Regulation, undertakings should disclose information on the proportion of the turnover, capital expenditure and operating expenditure ('key performance indicators') of their activities related to assets or processes associated with environmentally sustainable economic activities 'climate change mitigation'.

BC439. When reporting on the Taxonomy Regulation's climate change mitigation related key performance indicators, as specified in the CSRD-proposal[215], undertakings should follow the rules set out in the Climate Delegated Act to translate the technical screening criteria into quantitative economic performance indicators.

Proposed disclosure of revenues, CapEx and OpEx related to climate change adaptation as per Article 8 of the Taxonomy Regulation

BC440. As required by Article 8(1) of the Taxonomy Regulation[216], undertakings that are subject to Articles 19a or 29a of Directive 2013/34/EU of the European Parliament and of the Council should disclose in their non-financial statement or consolidated non-financial statement information on how and to what extent their activities are associated with environmentally sustainable economic activities 'climate change adaptation'.

BC441. As requested by Article 8(2) of the Taxonomy Regulation, undertakings should disclose information on the proportion of the turnover, capital expenditure and operating expenditure ('key performance indicators') of their activities related to assets or processes associated with environmentally sustainable economic activities 'climate change adaptation'.

BC442. When reporting on the Taxonomy Regulation's climate change mitigation and climate change adaptation related key performance indicators, as specified in the CSRD-proposal[217], undertakings should follow the rules set out in the Climate Delegated Act to translate the technical screening criteria into quantitative economic performance indicators.

[214] 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.

[215] 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.

[216] 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.

[217] 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.

How to disclose?

[To be developed]

Definitions

BC443. As stated in Article 2 of the Taxonomy Regulation[218], '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.

BC444. As stated in Article 2 of the Taxonomy Regulation, 'climate change adaptation means the process of adjustment to actual and expected climate change and its impacts.[219]

BC445. As stated in Article 10 of the Taxonomy Regulation, "an economic activity shall qualify as contributing substantially to climate change mitigation where that activity contributes substantially to the stabilisation of greenhouse gas concentrations in the atmosphere at a level which prevents dangerous anthropogenic interference with the climate system consistent with the long-term temperature goal of the Paris Agreement through the avoidance or reduction of greenhouse gas emissions or the increase of greenhouse gas removals, including through process innovations or product innovations by: (a) generating, transmitting, storing, distributing or using renewable energy in line with Directive (EU) 2018/2001, including through using innovative technology with a potential for significant future savings or through necessary reinforcement or extension of the grid; (b) improving energy efficiency, except for power generation activities as referred to in Article 19(3); (c) increasing clean or climate-neutral mobility; (d) switching to the use of sustainably sourced renewable materials; (e) increasing the use of environmentally safe carbon capture and utilisation (CCU) and carbon capture and storage (CCS) technologies that deliver a net reduction in greenhouse gas emissions; (f) strengthening land carbon sinks, including through avoiding deforestation and forest degradation, restoration of forests, sustainable management and restoration of croplands, grasslands and wetlands, afforestation, and regenerative agriculture; (g) establishing energy infrastructure required for enabling the decarbonisation of energy systems; (h) producing clean and efficient fuels from renewable or carbon-neutral sources; or (i) enabling any of the activities listed in points (a) to (h) of this paragraph in accordance with the [definition of 'enabling activities' in] Article 16".

BC446. As stated in Article 11 of the Taxonomy Regulation, "an economic activity shall qualify as contributing substantially to climate change adaptation where that activity: (a) includes adaptation solutions that either substantially reduce the risk of the adverse impact of the current climate and the expected future climate on that economic activity or substantially reduce that adverse impact, without increasing the risk of an adverse impact on people, nature or assets; or (b) provides adaptation solutions that contribute substantially to preventing or reducing the risk of the adverse impact of the current climate and the expected future climate on people, nature or assets, without increasing the risk of an adverse impact on other people, nature or assets".

Calculation methods

[218] 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.

[219] 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.

BC447. Undertakings should disclose the information referred to in Article 8(1) of the Taxonomy Regulation[220] as specified in annexes of the European Commission's Delegated Acts.

BC448. The key performance indicators of non-financial undertakings, including any accompanying information to be disclosed pursuant to Annexes I and II of the European Commission's Delegated Acts, should be disclosed from 1st January 2023.

BC449. Below is an illustrative table of the expected information related to climate objectives extracted from the Annexes of the Delegated Acts of the Taxonomy Regulation.

	Climate change mitigation		Climate change adaptation	
Proportion of turnover/CapEx/OpEx from products and services associated with Taxonomy-aligned activities	N-1	N	N-1	N
Proportion of turnover				
Absolute turnover (Amount m€)				
% of Taxonomy eligible turnover				
% of Taxonomy aligned turnover				
Proportion of CapEx				
Absolute CapEx (Amount m€)				
% of Taxonomy eligible CapEx				
% of Taxonomy aligned CapEx				
Proportion of Green OpEx				
Absolute OpEx (Amount m€)				
% of Taxonomy eligible OpEx				
% of Taxonomy aligned OpEx				

Sources of information

BC450. The Taxonomy Regulation[221] should be used as a reference source of information when disclosing revenues, CapEx and OpEx related to climate change mitigation and climate change adaptation.

Financial Exposure to Transition and Physical Risks; Financial Opportunities

Why disclosing on Financial Exposure to Transition and Physical Risks; Financial Opportunities?

Background

BC451. 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.

BC452. 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.

[220] 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.

[221] 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.

BC453. The IPCC's 2018 Special Report on 1,5°C[222] 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.

BC454. 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 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.

BC455. 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.

BC456. 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.[223]

BC457. 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.

BC458. 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 [224].

BC459. 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.

BC460. 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.

[222] IPCC, "Special Report on Global Warming of 1.5 °C", 2018. Available here.

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

EU legislation and recommendations

BC461. The CSRD-proposal[225] 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".

BC462. Under the NFRD[226], 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).

BC463. The European Commission's Guidelines on reporting climate-related information[227] define transition risks as risks to the company that arise from the transition to a low-carbon and climate-resilient economy. They include:

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

BC464. The European Commission's Guidelines on reporting climate-related information define physical risks as risks to the company that arise from the physical effects of climate change. They include:

- 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.
- 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.

The exposure of a company to physical risks does not directly depend on whether or not that company has a negative impact on the climate.

BC465. The European Commission's Guidelines on reporting climate-related information recommend describing the company's processes for identifying and assessing climate-related risks over the short, medium, and long term and disclose how the company defines short, medium, and long term. They also recommend describing the principal climate-related risks the company has identified over the short, medium, and long term throughout the value chain, and any assumptions that have been made when identifying these risks. This description should include the principal risks resulting from any dependencies on natural capitals threatened by climate change, such as water, land, ecosystems or biodiversity. They finally recommend disclosing the assets committed in regions likely to become more exposed to acute or chronic physical climate risks.

[225] 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.

[226] 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.

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

BC466. The Taxonomy Regulation[228] establishes a 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 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	

BC467. On top of the above classification of physical risks, the Taxonomy Regulation's Delegated Acts on climate also defines a "generic criteria for DNSH to climate change adaptation" that is to "perform a robust climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity".

BC468. The EBA[229] 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.

- 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.
- 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.

[228] 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.

[229] EBA, "Report on Management and Supervision of ESG Risks for Credit Institutions and Investment Firms", 2018. Available here.

BC469. The EBA's public consultation related to draft technical standards on Pillar 3 disclosures of ESG risks[230] 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.

- 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.
- Credit establishments' in-house methodology may lack maturity for some time, especially for establishments with subsidiaries outside the EU.
- The templates should not assume a relationship between prudential metrics and physical risks.
- The information on the maturity of the loan and on the lifespan of the underlying asset should be included in the template.
- Physical risks should be reported in a qualitative manner and order of magnitude per large geographical areas and sectors only.
- 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.

BC470. The European Commission's Strategy on Adaptation to Climate Change[231] 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[232] 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".

BC471. The European Insurance and Occupational Pensions Authority (EIOPA)[233] aims to address key issues of climate change-related risk for the insurance sector.

- 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.
- 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

[230] EBA, Consultation Paper on Draft Technical Standards on Pillar 3 disclosures of ESG risks, 2021. Available here.

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

[232] 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.

[233] EIOPA, News "EIOPA further contributes to sustainable finance", 2021. Available here.

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.

- 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.

BC472. 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[234] 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.

Global reporting frameworks

BC473. TCFD[235] establishes the disclosure of the following items:

- Describe the organisation's processes for identifying and assessing climate-related risks.
- Describe the organisation's processes for managing climate-related risks
- Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.

BC474. TCFD specifies 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". The Task Force 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". Its recommendations include examples of transition risks (see annex table A1).

- TCFD recommends that undertakings should describe significant concentration of exposure to transition risk. The Task Force encourages to describe the "proportion of assets and/or operating, investing, or financing activities materially exposed to transition risk".
- TCFD encourages companies to disclose financial exposure on transition risks on key categories of commonly accepted risks: CDP' Climate Change Questionnaire (C2.3a)[236]; European Commission's Guidelines on reporting climate-related information, Annex 1.4 and Annex 1.5[237]; EBC Supervisory Expectation: 9.2,13.5 and EBA Guidelines (EBA/REP/2021/18).
- TCFD recognises as an example that the energy sector is facing significant transition risks (i.e., the financial risk arising from the changes in asset valuations caused by the structural shift toward a low-carbon energy system).This is because the utility sector's asset valuations are at risk from the disruptive impact of the policy, technology, and portfolio changes that will occur over the next two to three decades as policies, technology, and markets shift to a low-carbon energy system.
- TCFD's main proposal of transition risk metrics is related to expenses metric (CapEx and OpEx) needed to develop new technologies enabling to manage or mitigate transition risks. The level of expenditures provides an indication of the level to which future earning capacity of core business could be affected.

[234] The World Bank, "Carbon Pricing Dashboard", 2017. Available here.

[235] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

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

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

BC475. TCFD also specifies that "physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns". The Task Force defines acute risks as "those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods" and chronic risks as "longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves". It 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".

- TCFD suggests that companies should describe physical risks that might affect the organisation's inputs and outputs over time, including sensitivity to particular variables affecting availability, quality, or cost of inputs and outputs over time.
- TCFD encourages disclosing the "proportion of assets and/or operating, investing, or financing activities materially exposed to physical risks, based on key categories of commonly accepted risks". These proportions will be specific to the geography where the assets or activities are located and their likely exposure or vulnerability to the risk.
- TCFD recommends to insurance companies to provide "aggregated risk exposure to weather-related catastrophes of property business (i.e. annual aggregated expected losses from weather related catastrophes) by relevant jurisdictions".

BC476. TCFD's 2021 consultation proposes two financial metrics without detailing the calculation methods, "proportion of assets and/ or operating, investing, or financing activities aligned toward climate-related opportunities based on key categories of commonly accepted opportunities" and the "amount of expenditure or capital investment deployed toward climate risks and 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[238]. The second one is similar to the proportion of CapEx and OpEx related to assets or processes associated with environmentally sustainable economic activities that is required under the Taxonomy Regulation.

BC477. 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).

BC478. The European Bank for Reconstruction and Development's Report on Advancing TCFD guidelines on physical risks and opportunities[239] states that undertakings should disclose 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).

BC479. The ISO published in 2021 a general framework[240], 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).

[238] 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.

[239] EBRD's Report "Report: Advancing TCFD Guidance on Physical Climate Risks and Opportunities" (2018).

[240] 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.

Users' needs (Transition Risks)

BC480. The reporting entity 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.

BC481. 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.

BC482. The EBA's report on management and supervision of ESG risks for credit institutions and investment firms[241] 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.

BC483. Nevertheless, the EBA also lists a number of challenges to reach the integration of ESG risks into institutions management process, notably the following.

- Level of uncertainty: The timing and effect of policies or of civil society behaviour are difficult to predict.
- 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 performance of an institution. It remains challenging to translate the available ESG data into expectations for the financial performance of a counterparty.
- 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.
- 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.

BC484. 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:

- 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),
- Energy efficiency: energy consumption intensity and use of renewable sources of energy.

BC485. 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

[241] EBA, "Report on Management and Supervision of ESG Risks for Credit Institutions and Investment Firms", 2018. Available here.

intensity metrics. For instance, the SFDR[242] 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.

BC486. 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[243] underlines the predominant role of stranded assets in transmitting the transition financial impact from corporates to financial institutions.

BC487. 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:

- Scope: physical assets whose costs cannot be recovered with important stranding risks in the long-lived power generation plants,
- 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),
- Key assumptions: future prices, underlying scientific scenario, policy framework facilitating the transition, etc.,
- Value: book value.

BC488. 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 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.

BC489. Additionally, these approaches raise the issue of connectivity with financial information. The IASB[244] 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."

BC490. The draft RTS under SFDR[245] 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.

BC491. The ESAs also define an additional disclosure requirement measuring investments in companies without carbon emission reduction initiatives. This disclosure could provide

[242] 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.

[243] NGFS, "Overview of Environmental Risk Analysis by Financial Institutions", 2020. Available here.

[244] IFRS, Effects of Climate related Matters on Financial Statements, 2020. Available here.

[245] ESAs, "Final Report and Draft Regulatory Technical standards", 2021. Available here.

stakeholders with a qualitative relevant information on the transition risk management of the reporting entity.

BC492. 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[246], 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.

BC493. 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[247] on environmental objectives. Therefore, the Platform concludes that failing the DNSH criteria is technically equivalent to causing significant harm.

BC494. 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 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[248]; b) the activities that fail performance levels set by DNSH technical screening criteria in delegated acts where such DNSH criteria exists.

BC495. 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.

Users' needs (Physical Risks)

BC496. 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

[246] Platform on Sustainable Finance, "Public Consultation Report on Taxonomy extension options linked to environmental objectives", July 2021. Available here.

[247] 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.

[248] 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.

impairment or stranding of assets, value of assets and liabilities, and changes in cost of business interruptions.

BC497. 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.

BC498. 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.

Conclusions

BC499. Cluster 2 considers that undertakings should disclose qualitative information regarding the climate-related risk, vulnerability and opportunities assessment, including the identification, assessment management, and information about their resilience to different climate scenarios as described in the "Climate Impacts, Risks and Opportunities" and "Business Strategy and Climate" reporting areas. Thus, if undertakings identify principal climate-related risks, they should disclose the estimated financial effects.

BC500. No common methodology exists yet to disclose quantitative measurements of such risks and opportunities. Under these circumstances, the disclosure of the quantified climate-related risks or opportunities is proposed without a requirement on the quantification methodology.

BC501. Concerning quantitative disclosures related to physical risks, Cluster 2 acknowledges that the European legislation and guidelines (European Commission's Guidelines on reporting climate-related information[249], Climate adaptation strategy[250] and Taxonomy Regulation[251] requiring as a DNSH criteria to perform a robust climate risk and vulnerability assessment), as well as global reporting frameworks and methodologies provide undertakers with the best-in-class management and reporting practices for physical risks.

BC502. 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 "Climate Impacts, Risks and Opportunities" section). This would allow to identify the relationship between physical risks (mature methodologies exist) and the undertakings financial exposure (owned assets at risk and/or in the value chain) and build its adaptation and resilience strategy.

BC503. Concerning quantitative disclosures related to transition risks, Cluster 2 acknowledges that methodologies are highly dependent on the business model of the undertaking itself, on carbon pricing policies and mechanism, on common definition of assets at risks, and on a common definition of significantly harmful activities.

BC504. Nevertheless, Cluster 2 considers essential to require information comparable and proportionate to all undertakings covered by the CSRD-proposal[252], the required information relating to transition risks should then be based on a common state of play.

BC505. Thus, as a first step, undertakings should disclose the financial consequences of participating in Cap & Trade schemes such as the EU ETS allocation plan.

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

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

[251] 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.

[252] 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.

BC506. 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[253] 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. Waiting for further research and methodology developments, the disclosure of the quantified climate-related risks is proposed without a requirement on the quantification methodology itself.

BC507. As regards the climate-related financial opportunities, based on TCFD requirements, Cluster 2 considers that undertakings should disclose the financial effects of climate related opportunities stemming from climate change mitigation and adaptation products and services development.

What to disclose?

[Cluster 2 suggests to use the word 'financial effect' to cover risks and opportunities instead of 'financial impact' as the word 'impact' is already used for impact materiality; this definition should be reviewed once the glossary has been aligned with all other Clusters]

Proposed disclosure of financial exposure to transition risks

BC508. As proposed under "Climate Impacts, Risks and Opportunities" section, undertakings should describe the processes for identifying and assessing short-, medium- and long term transition risks along the value chain, including a definition of the considered time horizons, how size and scale of the risks are assessed and how principal transition risks are selected.

BC509. 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. Therefore, 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.

BC510. The PSF's proposal of an extended taxonomy (see BC 492 to BC 493) raises the need to better define implementation options of a significant harm taxonomy. Cluster 2 considers that 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.

BC511. At global level, TCFD's 2021 public consultation[254] proposes in the metrics and targets section 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. In the application section that describes industry-specific metrics, no further information is provided to precise metrics or methodology to disclose assets exposed to transition risk with a sectoral approach.

BC512. In this perspective, Cluster 2 acknowledges that requiring mandatory disclosure of sector agnostic quantitative metrics measuring exposure to transition risk is not relevant yet. Particularly, the corporate disclosure of the proportion of assets exposed to transition risks is not accurate to feed the risk assessments' methodologies and models of financial institutions until a commonly agreed methodology is defined.

[253] Platform on Sustainable Finance, "Public Consultation Report on Taxonomy extension options linked to environmental objectives", July 2021. Available here.

[254] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

BC513. Therefore, Cluster 2 considers that undertakings should disclose the potential effects of transition risk drivers, according to free methodology. Nevertheless Cluster 2 considers that the disclosures would at least encompass the following requirements:

a. A narrative description of the potential effects of developments in climate policies, markets, technologies evolutions or reputation perception on future operating profits and costs of capital as well as in terms of social costs (e.g. closure of plants), beyond what is already recognised under financial reporting, in the short, medium and long term.;

b. Based on the identified principal transition risk, a quantitative measurement of the potential financial effects. This quantitative assessment should be accompanied by a detailed description of the scenario, the definitions and quantification methodologies used by undertakers to measure the range of financial inherent effects. Examples include: future costs of offsets, the proportion (%) or value range of assets generating locked-in emissions ie potential stranded assets (see "Climate Targets" section), the range of potential financial effects of the EU ETS allocation plan over the period 2021-2030 , the proportion (%) of turnover related to significant harmful activities that might be at risk (turnover decrease or margin erosion).

BC514. In particular, Cluster 2 recommends that undertakings that are subject to the EU ETS should disclose the range of potential financial effects of the EU ETS allocation plan over the period 2021-2030, including the number of allowances to be purchased yearly on the market (gap between estimated emissions and free allocations) and the estimated yearly cost per tonne to be purchased. This would provide investors and data users with a sense of the EU cap and trade scheme's impact on corporate operations and transition risks beyond what may already be recognised in the financial statements.

BC515. In order to illustrate the disclosure of identified transition risk financial effects, Cluster 2 proposes that undertakers could disclose the following table:

Climate related risks drivers	Potential Financial Impacts	Metrics potentialy impacted	Estimated financial impact
Policy			
- Increased pricing f GHG emissions	Increased compliance costs, insurance premiums, sourcing or funding costs	Operating costs, cost of capital	m€
- Mandates on and regulation of existing products and services	Increased costs or reduced demand for products and services	Turnover, operating costs, funding cost	m€
Technology			
- Substiution of existing products and services with lower emissions options	Early retirement of existing assets,reduced demand for products and services, costs to adapt/deploy new practices	Turnover, operating costs, funding cost, assets repricing	m€
- Unsuccessful investment in new techonologies	Research and development expenditures, capital investment in technology developments	Capital expenditures, operating costs	m€
Market			
-Changing customer behaviour, shifts un consumer preferences	Reduced demand for goods and services due to shift in consumer preferences	Turnover, assets repricing	m€
-Increased cost of raw material	Increased production costs due to changing prices	Operating costs	m€

Proposed disclosure of financial exposure to physical risks

BC516. As proposed under "Climate Impacts, Risks and Opportunities" section, undertakings should describe the processes for identifying and assessing short-, medium- and long term physical risks along the value chain, including a definition of the considered time horizons, how size and scale of the hazards are assessed and principal risks are selected.

BC517. Based on the principal physical risks identified, undertakings should disclose the potential inherent financial effects (m€) (free definitions and quantification methodologies to assess the range of financial inherent effects) before mitigation actions (i.e. with no financial accounting consequences), and beyond what is already recognised in the financial statements. It includes for instance the proportion (%) of assets exposed to physical risks and any other indicators deemed relevant.

BC518. The potential financial effects of physical risks derive from a robust climate risk and vulnerability assessment that is already required by the DNSH criteria for the Taxonomy Regulation[255]'s eligible activities.

BC519. 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, financial impact assessment, risks mitigation actions. As an example, the Taxonomy DNSH adaptation criteria describe the approach with the following words: "(a) screening of the activity to identify which physical climate risks from the list of the classification of climate-related hazards (see BC 464) may affect the performance of the economic activity during its expected lifetime; (b) where the activity is assessed to be at risk from one or more of the physical climate risks listed, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity; (c) an assessment of adaptation solutions that can reduce the identified physical climate risks".

BC520. The most advanced methodologies recommend modelling IPCC scenarios with geographical location of assets (owned and value chain) on various time horizons. The use of models allows to identify the assets subject to climate-related hazards such as heat and cold waves, number of frost days per year, heavy precipitations, wind intensity change, etc.

BC521. In this context, Cluster 2 considers that undertakings should disclose how they conducted their analysis of available climate data and projections across a range of future scenarios, that should be at least RCP 2.6 and RCP 8.5. The undertakings should disclose how they consider the hazards that affect the most the company in a qualitative and quantitative way along the complete value chain. It should be consistent with the expected lifetime of the activity and the specific location of facilities. Hazards should be analysed through their likelihood, magnitude and duration.

BC522. Then, when assessing the potential inherent financial effects of the climate-related hazards, the undertakings should disclose definition and quantification range of financial costs: value-at-risk, property damages, annual average loss from business disruptions, projected change in production, revenues, markets demand, OpEx, CapEx due to climate change, etc. This assessment of the financial effects is still at the research and development stage and only best-in-class undertakings are able to reach that level of analysis.

BC523. Examples of financial consequences are listed hereafter: Disruptions; Impact on production depending on the availability of water, electric energy, raw materials or on climate variation sensitive materials; Geographic concentration of suppliers/cluster tendency; Shortage of inputs or raw materials; Increased cost of supplies due to scarcity; Change in input/resource prices; Weather sensitivity of production and operation process, need to cool or heat processes and workplaces ; relocation costs; workforce intensity of production; physical damage to assets : production facilities, infrastructures, stock & equipment Increased insurance premiums and capital costs; need for cold chain, damage to transportation infrastructure when use of road, water and rail transportation or permanent loss and relocation costs, dependency to port facilities, fluvial transportations and operations, cost of delays due to degraded transport conditions, loss of revenue due to failed delivery or service disruption; etc.Undertakings could disclose the exposure, expressed in percentage, of financial assets, non-financial assets and assets under management to principal climate-related physical risks provided a detailed definition and methodology are developed.

BC524. Finally, in consistency with the "Actions & Resources" section, undertakings should disclose the potential costs of adaptation solutions that are put in place or planned to mitigate the physical risks (resulting in residual risks). It can include for instance costs of the integration

[255] 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.

to financial planning tools, any subscription to insurance in order to prevent physical climate risks to which the company is exposed, etc.

BC525. Cluster 2 acknowledges that a progressive approach should be adopted to define quantitative metrics requirements on physical risks financial effects, whether based on the depth of the materiality or on the activity or assets of the undertakings subject to CSRD disclosure requirements.

BC526. As an illustration, the best-in-class reporting elements are described in the table below:

Disclosure of physical risks' identification, assessment and management	**EU and global reporting related requirements**
Data and scenario	Taxonomy Regulation (BC 465)
Hazards	Taxonomy Regulation (BC 464)
Exposition and sensitivity	TCFD (BC 473)
Financial resource	TCFD (BC 473)
Supply chain	EU guidelines (BC 463)
Production and Logistic	EU guidelines (BC 463)
Sales and demand	European Bank for Reconstruction and Development (BC 476)
Disclosure on adaptation and resilience strategy	EU and global reporting related requirement

Proposed disclosure of financial opportunities relating to climate change mitigation and climate change adaptation

BC527. Cluster 2 considers that to quantify the financial effects of climate-related opportunities over the short, medium and long term (scale in terms of range of margin increase) as recommended by the TCFD consultation undertakings should disclose the proportion of product mix aligned towards climate-related opportunities,

BC528. To provide transparency on the above disclosure, undertakings should describe the performance criteria used for the definition of low-carbon products and adaptation solutions.

BC529. Climate-related opportunities encompass turnover from products and services demonstrating clear additionality as for instance those generating avoided emissions for customers (see definition of avoided emissions in "GHG Emissions" section).

BC530. Cluster 2 considers as a best practice to be recommended to undertakings to disclose the proportion of product mix aligned towards climate-related opportunities accompanied by the performance criteria used as illustrated in the following table:

		Climate change mitigation and adaptation			
Proportion of product mix aligned towards climate-related opportunities *	Description of performance criteria	N-2	N-1	N	2030 target
Low-carbon products					
Adaptation solutions					
Etc.					
Total amount (m€)					
% of total turnover					

* Climate-related opportunities encompass turnover from products and services demonstrating clear additionality as for instance those generating avoided emissions for customers (see definition of avoided emissions in "GHG Emissions" section).

How to disclose?

[To be developed]

Definitions

BC531. Resilience is 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.[256]

BC532. Hazards is the potential occurrence of a natural or human-induced physical event or trend or physical impact 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. In this report, the term hazard usually refers to climate-related physical events or trends or their physical impacts. Thus, it includes processes that range from brief events, such as severe storms, to slow trends, such as multi-decade droughts or multi-century sea level rise.) A climate hazard should be appreciated in function of its likelihood, magnitude and duration.[257]

BC533. Exposition is the degree to which a company's value chain (e.g., assets, operations, supply chain, customers) has the potential to be impacted by physical climate hazards due to its geographic location. These metrics should link part of a company's value chain (e.g., physical assets) with specific physical climate hazards (e.g., tropical cyclones).[258]

BC534. Vulnerability is the propensity of different parts of a company's value chain to suffer negative impacts when exposed to and then impacted by physical climate hazards. These metrics should assess specific characteristics of a company's value chain (e.g., water intensity) that may make that part of the value chain more or less likely to suffer negative impacts from physical climate hazards.[259]

Calculation methods

BC535. Cluster 2 suggests that undertakings use the calculating methods of their own quantitative metrics related to transition and physical risks as a first step until the methodology is sufficiently mature at the European level. Cluster 2 recommends that undertakings take into account the Taxonomy Regulation[260]*'s technical screening criteria if relevant.*

BC536. Cluster 2 proposes that undertakings use the calculating methods from the future Significant Harm Taxonomy Regulation to define quantitative metrics related to transition risks.

Sources of information

BC537. The Taxonomy Regulation[261] *if extended to significantly harmful activities should be used as a reference source of information when disclosing transition risks.*

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

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

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

[259] WRI, "Assessing Physical Risks from Climate Change: Do Companies and Financial Organizations Have Sufficient Guidance?", 2021, p. 38. Available here.

[260] 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.

[261] 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.

BC538. TCFD may be considered if further developed and detailed and meeting Cluster 2's quality of information criteria.[262]

Connectivity with Financial Reporting

[To be developed]

Effects and Cost-benefit Analysis

[To be developed]

[262] TCFD, "Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans", June 2021. Available here.

Annex 1: Elements of a credible Transition Plan

Based on a review of relevant projects and initiatives (see BC 111) the table below summarises general elements of transition plans.

ESRS reporting areas	**Main elements of transition plans**	**Sub elements**	**Description of the elements**	**Framework alignment**
Climate Targets	1. Targets	1.1 Alignment of scope 1+2+3 absolute emissions and intensity reduction targets with EU climate goal and 1.5°C target (2030 & 2050)	The objective of transition plans should be designed in consideration of, and in order to, achieve targets. Transition plan is meaningful only when related to a climate target.	TCFD 2021 Consultation and CSRD
		1.2 Decarbonisation trajectory & time horizon of targets		TCFD 2021 Consultation
		1.3 Achievement of previous targets		SBTi 2021 Manual
Actions and Resources	2.Material Investment	2.1 CapEx investment for low carbon transition	It is central to understand the credibility of the plan, to monitor progress against, climate-related targets, outlining amount of expenditure or capital investment deployed towards achieving the target. Articulation of how expenditure or capital investment supports decarbonisation strategy. This should not only reflect EU Taxonomy aligned investments but all investments aiming at achieving the climate target.	TCFD and Taxonomy Regulation
Actions and Resources	3.Intangible Investment	3.1 R&D for low-carbon transition		TCFD, Taxonomy Regulation
Carbon Emissions Climate Targets EU Taxonomy on Mitigation	4. Past and future performance of products & services	4.1 Products and services emissions	The objective is to measure the emissions performance of the company's products and services. This indicator applies either to companies that are multi-product/service, or to companies that are mono-product. It should correspond to the product/service life cycle assessment. It is used to check the most material issues on the product/services.	Taxonomy Regulation and the European Product and Organisation Environmental Footprint PEF/OEF
		4.2 Product emissions lock-in	The objective is to demonstrate the difference between the emissions of the company's existing and planned assets from the reporting year to 2050, and the emissions budget entailed by the company's carbon budget over the same period. The concept of locked-in emissions allows to make a judgment on the company's outlook in more distant periods than the ones of the investment plans. Analysing a	World Resource Institute ('WRI')[263], UNFCCC act generic methodology[264]

			company's locked-in emissions towards science-based remaining budgets introduces the means to scrutinise the potential cost of inaction, including the possibility of stranded assets.	
		4.3 Taxonomy product share	The objective is to cover Article 8 of the EU Taxonomy Regulation related to KPIs disclosure.	Taxonomy Regulation
Climate Targets	5. Decarbonisation roadmap	5.1 Identifying mitigation measures deployed to reduce GHG emissions to reach the target	The objective is to outline plausible ways to achieve the EU decarbonisation goals. It should be verifiable and based on the best available facts and scenarios. It should identify the evolution of products & services demand, the performance hypothesis of materials & technologies that can affect the achievement of the target, as well as any risks related to the non-achievement of the hypothesis. It allows to inform the preparers and users of the disclosure: - Understanding the comprehensive view of future decarbonisation opportunities. - Understanding the roadmap for immediate and long-term climate mitigation solutions - Understanding the potential emissions gap between the company projected emissions reduction and the EU climate goal.	TCFD transition plan, EU climate strategies.
Actions and Resources	6.Supply chain engagement	6.1 Forward looking supply chain strategy & risk assessments	Disclosure of business decisions that influence, enable or otherwise shift the choices and behaviour of suppliers in order to reduce GhG emissions.	TCFD 2021 consultation and UNFCCC ACT generic methodology
Actions and Resources	7. Client	7.1 Activities and proposals for moving customers demand to low-carbon products	Disclosure of business decisions that influence, enable or otherwise shift choices and behaviour of customers in order to reduce GhG emissions.	TCFD 2021 consultation and UNFCCC ACT generic methodology
Actions and Resources	8. Policy engagement	8.1 Company policies on engagement with trade associations	Disclosure of actions against or in favour of climate-friendly public policies, including those of trade associations.	UNFCCC act generic methodology
Actions and Resources	9. Business Model	9.1 Describe experience with running low carbon business models 9.2 Plan to develop future low-carbon compatible business models	Disclose plans to phase out or exit high carbon products and services with phase out dates and to create new low carbon business models.	TCFD 2021 consultation and UNFCCC ACT generic methodology