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Exposure Draft

DRAFT EUROPEAN SUSTAINABILITY REPORTING STANDARD

LSME ESRS SECTION 4 ENVIRONMENTAL DISCLOSURES

DISCLAIMER (to be revised)

Section 4 Environmental Disclosures set out in paragraphs xx to xx and Appendix A: *Application Requirements*. Appendix A has the same authority as the main body of this section. Each Disclosure Requirement is stated in a bold paragraph, followed by a paragraph that illustrates the objective of the disclosures. This section also uses terms defined in other sections and should be read in the context of its objective.

CONTENT AND STATUS OF THIS DRAFT

This draft has to be read in conjunction with the Agenda Papers on LSME discussed in SR TEG and SRB meetings held from January to September 2023.

This draft has been developed as a markup from version 3.1 LSME as sent to SR TEG and SR Board during the internal consultation period. The changes are made based on the feedback and comments received and the public discussions at SR TEG (12 and 18 September) and SRB (13 September).

To reflect the principle of proportionality, the following key simplifications have been implemented in this document (on the basis of the SR TEG discussions/ approach presented by the EFRAG Secretariat at those meetings):

- The text of SET 1 standards has been integrally considered and amended where appropriate.
- The disclosures on policies, actions and targets related to environment have been centralised in Section 3 under Disclosure Requirement 11 (IR-3) – Policies and Actions in relation to sustainability matters, and Disclosure Requirement 12 (IR-4) – Targets in relation to sustainability matters. All EU datapoints have been preserved.
- Following the decision tree presented previously to the SR TEG, only metrics have been kept in this topical section. Originally, only metrics related to SFDR PAIs, Pillar III EBA and Benchmark regulation requirements were considered. However, the working paper has included also those metrics that impact the cap of the value chain for Set 1 (such as E1-4 GHG removals, E2-2 Substances of concern and substances of very high concern, in E5-2 the disclosure on hazardous and non-hazardous waste and E5-1 Resource inflows).

Following the SR TEG meeting on 21 February the following specific changes have been introduced:

- The DRs concerning financial effects for E2, E3, E4 and E5 have been simplified and centralised in this section as E-6. The DR E1-4 (financial effects from material physical and transition risks and potential climate-related opportunities) is maintained as separate DR in E1 due to the level of granularity and the many datapoints related to EU law (Pillar 3 and Benchmark), no further simplification could be achieved.
- DR E1-5, E4-1 and E4-5 have been further simplified

Following the SR TEG drafting session on 12 May, the following simplifications have been introduced:

- Climate Transition Plan has been deleted as a DR, its datapoints are moved to the Section 2 Centralized Disclosure on Targets, in the ARs - including the EU/Pillar 3 related datapoint (highlighted in yellow)
- Transition Plan for Biodiversity was deleted for additional simplification in line with EC DA ESRS (phase-in and voluntary E4)
- Scope 1 and 2 GHG emissions and Energy consumption and mix (renewable energy): granularity was reduced.

Following the SR TEG drafting session on 21 June, the following changes have been included:

- The disclosures on biodiversity that were made “voluntary” in the new EC Delegated Act were analysed to identify the value chain dimension. In E4-1 of this draft the following DR was identified: “If the undertaking has identified material impacts with regards to land-use change, or impacts on the extent and condition of ecosystems, it may also disclose their land-use based on a Life Cycle Assessment.”
- This DR was kept as a “may” disclosure in V4 LSME ESRS due to its value chain dimension.
- The other datapoints that were made voluntary in the EC delegated Acts and that have no impact on value chain were deleted from v4 LSME ESRS.

Following the SR TEG meeting on 12 September, the following agreed changes have been included:

- The Objective part of the standard was streamlined and simplified.

- The disclosures on energy intensity based on net revenue and GHG intensity were simplified: if a proper reconciliation of relevant amounts is not feasible, the undertaking to explain where the relevant amounts can be found in the financial statements. In those two disclosures, SR TEG also agreed to include 1-year phase-ins in LSME. For the list of phase-in DRs, please refer to Section 1 Appendix C of this [draft] standard.
- The disclosure on GHG removals and mitigation projects financed through carbon credits (E1-3) were realigned with the main text of E1, while introducing some simplification in terms of what is being disclosed (deleted contribution to upstream and downstream value chain; deleted plans to cancel in future and methodology on residual emissions near net-zero);
- On impact metrics on E4-Biodiversity, reintroduced invasive alien species as a disclosure.
- New proposal simplifying E5 Circular economy disclosure has been introduced, namely:
 - (a) Should be clarified for inflows that only IROs extend to value chain, but that metrics do not. This has been done by including the text “in your own operations” in the metric part of resource inflow;
 - (b) Change of metrics on inflows from: 1) Simplification of language on biological material exposure, with deletion of application of cascading principle; 2) Simplification of language on use of secondary materials;
 - (c) On resource outflows (products), Simplification was added to keep metrics but to focus instead on % of products and services designed to be durable and repairable.
 - (d) On Waste, a simplification was introduced on language and the data point on total amount of non-recycled waste was deleted as it is also asked the percentage on non-recycled in face of total. Only the % of total that is non-recycled is asked.

In addition to the adjustments made following the decisions of SR TEG 12 September, this draft proposal also includes some simplified Application Requirements regarding the Anticipated financial effects from material environmental-related matters other than climate.

All cross-references in different paragraphs and sections may be subject to numbering adjustments

The acronyms and defined terms in LSME will be merged together with all sections, as a mandatory appendix.

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Objective

1. The objective of the Environmental Disclosures in this [draft] Standard is to enable users of sustainability statements to understand:
 - (a) how the undertaking, actually or potentially, negatively impacts the following environmental topics:
 - i. climate change (E1),
 - ii. pollution of air, water and soil (E2),
 - iii. water and marine resources (E3),
 - iv. biodiversity and ecosystems (E4)
 - v. resource use and circular economy (E5);
 - (b) the plans and capacity of the undertaking to adapt its strategy and business model(s) in line with the transition to a sustainable economy and international environmental agreements, goals and initiatives, including, but not limited to:
 - i. the Paris Agreement (or an updated international agreement on climate change) and the objective of limiting global warming to 1.5°C (E1);
 - ii. the alignment with the European Green Deal's ambitions for prevention, control and elimination of pollution and the objective of creating a toxic-free environment with zero pollution in support of the EU Action Plan "Towards a Zero Pollution for Air, Water and Soil" (E2);
 - iii. the alignment with the European Green Deal's ambitions for clean water and the sustainability of the blue economy and fisheries sectors considering the EU Water Framework Directive and the EU Marine Strategy Framework Directive and the EU Maritime Spatial Planning Directive (E3);
 - iv. the Kunming-Montreal Global Biodiversity Framework and its goals and targets, the EU Biodiversity Strategy for 2030, the Directive 2009/147/EC of the European Parliament and of the Council and Council Directive 92/43/EEC (EU Birds and Habitats Directives), the Directive 2008/56/EC of the European Parliament and of the Council (Marine Strategy Framework Directive) (E4);
 - v. the alignment with circular economy principles, including but not limited to minimising waste, maintaining the value of products, materials and other resources at their highest value and enhancing their efficient use in production and consumption, based on the EU Circular Economy Action Plan, the Waste Framework directive and the EU industrial strategy (E5).
 - (c) any actions taken by the undertaking, and the result of such actions to prevent, mitigate or remediate potential negative impacts on the environmental topics, including:
 - i. to reduce GHG emissions and increase energy efficiency (E1);
 - ii. to prevent, control and reduce pollution of air, water and soil (E2);
 - iii. to reduce water consumption and to protect water and marine resources (E3);
 - iv. to protect and restore biodiversity and ecosystems (E4); and
 - v. to prevent and decrease resource depletion, increase resource efficiency and help decoupling the economic growth from the use of materials (E5).
 - (d) the nature, type and extent of the undertaking's material risks arising from the undertaking's impacts and dependencies on the environmental topics, and how the undertaking manages them; and

- (e) the financial effects on the undertaking over the short-, medium- and long-term of material risks arising from the undertaking's impacts and dependencies on the environment.
2. This [draft] Section 4 covers Disclosure Requirements related to the following sustainability matters as per AR15, Appendix A, Section 1 of this standard.
 3. The objectives in par. 1 and the metrics disclosure requirements under section 4 E1 to E5 shall be read in conjunction with Section 2 and 3 of this [draft], General Disclosures.
 4. The Disclosure Requirements under E1 to E5 of this Section of the [draft] Standard take into account the requirements of related EU legislation and regulation (i.e., EU Climate Law, Regulation (EU) 2019/2088 (SFDR), Regulation (EU) 2020/852 (the EU Taxonomy), Commission Delegated Regulation (EU) 2020/1818 (Climate Benchmark Regulation), and EBA Pillar 3 ESG risk disclosure requirements).

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Climate CHANGE (E1)

Disclosure Requirements – Climate Change (E1)

Disclosure Requirement E1-1– Energy consumption and mix

5. The undertaking shall provide information on its energy consumption and mix.
6. The objective of this Disclosure Requirement is to provide an understanding of the undertaking's total energy consumption in absolute value, improvement in energy efficiency, exposure to coal, oil and gas-related activities, and the share of **renewable energy** in its overall energy mix.
7. The disclosure required by paragraph 5 shall include the total energy consumption in MWh related to own operations disaggregated by:
 - (a) Total energy consumption from fossil sources¹;
 - (b) Total energy consumption from nuclear sources;
 - (c) total energy consumption from renewable sources; and
 - (d) In addition, where applicable, the undertaking shall disaggregate and disclose separately its **non-renewable** energy production and **renewable energy** production in MWh.²

Energy intensity based on net revenue³

8. The undertaking shall provide information on the energy intensity (total energy consumption per net revenue) associated with activities in **high climate impact sectors**. The disclosure on energy intensity shall only be derived from the total energy consumption and net revenue from activities in **high climate impact sectors**.
9. The undertaking shall specify the **high climate impact sectors** that are used to determine the energy intensity required by paragraph 8.
10. The undertaking shall disclose the reconciliation to the relevant line item or notes in the financial statements of the net revenue amount from activities in **high climate impact sectors** (the denominator in the calculation of the energy intensity required by paragraph 8). If it is not possible to provide a reconciliation after making reasonable efforts to do so, the undertaking shall provide an explanation of where in the financial statements the net revenue amount from activities in high climate impact sectors can be found.

Disclosure Requirement E1-2– Gross Scopes 1, 2, 3 and Total GHG emissions

11. The undertaking shall disclose in metric tonnes of Cq its⁴:

¹ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting a mandatory indicator related to principal adverse impacts as set out by indicator #5 in Table 1 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively “Share of non-renewable energy consumption and production”). The breakdown serves as a reference for an additional indicator related to principal adverse impacts as set out by indicator #5 in Table 2 of the same Annex (respectively “Breakdown of energy consumption by type of non-renewable sources of energy”)

² This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting a mandatory indicator related to principal adverse impacts as set out by indicator #5 in Table 1 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively “Share of non-renewable energy consumption and production”)

³ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting a mandatory indicator related to principal adverse impacts as set out by indicator #6 in Table 1 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively “Energy consumption intensity per high impact climate sector”).

⁴ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting a mandatory indicator related to principal adverse impacts as set out by indicators #1 and #2 in Table 1 of Annex 1

- (a) gross Scope 1 GHG emissions;
- (b) gross Scope 2 GHG emissions;
- (c) gross Scope 3 GHG emissions; and
- (d) total GHG emissions.

12. The objective of the Disclosure Requirement in paragraph 12 in respect of:

- (a) gross **Scope 1 GHG emissions** as required by paragraph 12 (a) is to provide an understanding of the direct impacts of the undertaking on climate change and the proportion of its total GHG emissions that are regulated under emission trading schemes.
- (b) gross **Scope 2 GHG emissions** as required by paragraph 12(b) is to provide an understanding of the indirect impacts on climate change caused by the undertaking's consumed energy whether externally purchased or acquired.
- (c) gross **Scope 3 GHG emissions** as required by paragraph 12(c) is to provide an understanding of the GHG emissions that occur in the undertaking's upstream and downstream value chain beyond its Scope 1 and 2 GHG emissions. For many undertakings, Scope 3 GHG emissions may be the main component of the GHG inventory and are an important driver of the undertaking's **transition risks**.
- (d) total GHG **emissions** as required by paragraph 12(d) is to provide an overall understanding of the undertaking's GHG emissions and whether they occur from its own operations or the upstream and downstream value chain. This disclosure is a prerequisite for measuring progress towards reducing GHG emissions in accordance with the undertaking's climate-related **targets** and EU policy **goals**.

13. The information from this Disclosure Requirement is also needed to understand the undertaking's climate-related **transition risks**.

14. When disclosing the information on **GHG emissions** required under paragraph 12, the undertaking shall refer to [draft] LSME ESRS section 1 Reporting undertaking and value chain. In principle, the data on GHG emissions of its associates or joint ventures that are part of the undertaking's upstream and downstream value chain (Section 1 par. XX) are not limited to the share of equity held. For its associates, joint ventures, unconsolidated subsidiaries (investment entities) and contractual arrangements that are joint arrangements not structured through an entity (i.e., jointly controlled operations and assets), the undertaking shall include the GHG emissions reflecting the extent of the undertaking's **operational control** over them.

15. In case of significant changes in the definition of what constitutes the reporting undertaking and its **value chain**, the undertaking shall disclose these changes and explain their effect on the year-to-year comparability of its reported GHG **emissions** (i.e., the effect on the comparability of current versus previous reporting period GHG emissions).

16. The disclosure on gross **Scope 1 GHG emissions** required by paragraph 12 (a) shall include:

- (a) the gross Scope 1 GHG emissions in metric tonnes of CO₂eq; and
- (b) the percentage of Scope 1 GHG emissions from regulated emission trading schemes, if applicable.

17. The disclosure on gross **Scope 2 GHG emissions** required by paragraph 12 (b) shall include:

- (a) the gross location-based Scope 2 GHG emissions in metric tonnes of CO₂eq; and
- (b) where applicable, the gross market-based Scope 2 GHG emissions in metric tonnes of CO₂eq.

of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively "GHG emissions" and "Carbon footprint"). This information is aligned with the Commission Delegated Regulation (EU) 2020/1818 (Climate Benchmark Regulation), Articles 5 (1), 6 and 8 (1).

18. The disclosure of gross **Scope 3 GHG emissions** required by paragraph 12(c) shall include GHG emissions in metric tonnes of CO₂eq from each significant **Scope 3 category** (i.e., each Scope 3 category that is a priority for the undertaking).
19. The disclosure of total **GHG emissions** required by paragraph 12(d) shall be the sum of **Scope 1, 2 and 3 GHG emissions** required by paragraphs 12(a) to 12(c). The total GHG emissions shall be disclosed with a disaggregation that makes a distinction of:
- (a) the total GHG emissions derived from the underlying Scope 2 GHG emissions being measured using the location-based method; and
 - (b) the total GHG emissions derived from the underlying Scope 2 GHG emissions being measured using the market-based method.

GHG Intensity based on net revenue⁵

20. The undertaking shall disclose its GHG **emissions** intensity. It shall provide the total GHG emissions in metric tonnes of CO₂eq (required by paragraph 12(d)) per net revenue.
21. The undertaking shall disclose the reconciliation to the relevant line item or notes in the financial statements of the net revenue amounts (the denominator in the calculation of the GHG **emissions** intensity required by paragraph 21). If it is not possible to provide a reconciliation after making reasonable efforts to do so, the undertaking shall provide an explanation of where in the financial statements net revenue amounts can be found.

Disclosure Requirement E1-3 – GHG removals and GHG mitigation projects financed through carbon credits

22. The undertaking shall disclose:

- (a) GHG removals and storage in metric tonnes of CO₂eq resulting from projects it may have developed in its own operations; and
- (b) the amount of GHG emission reductions or removals from climate change mitigation projects outside its value chain it has financed through any purchase of carbon credits.

23. The objective of this Disclosure Requirement is:

- (a) to provide an understanding of the undertaking's **actions** to permanently remove GHG from the atmosphere).
- (b) to provide an understanding of the extent and quality of **carbon credits** the undertaking has purchased or intends to purchase from the voluntary market, potentially for supporting its GHG neutrality claims (as stated in paragraph 26).

24. The disclosure on **GHG removals and storage required by paragraph 22 (a) shall include, if applicable:**

- (a) the total amount of GHG removals and storage in metric tonnes of CO₂eq, broken down by removal activity; and
- (b) the calculation assumptions, methodologies and frameworks applied by the undertaking.

25. The disclosure on **carbon credits required by paragraph 22 (b) shall include, if applicable, the total amount of carbon credits outside the undertaking's **value chain** in metric tonnes of CO₂eq that are verified against recognised quality standards and cancelled in the reporting period.**

⁵ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting a mandatory indicator related to principal adverse impacts as set out by indicator #3 in Table 1 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively "GHG intensity of investee companies"). This information is aligned with the Commission Delegated Regulation (EU) 2020/1818 (Climate Benchmark Regulation), Article 8 (1).

26. In the case where the undertaking may have made public claims of GHG neutrality that involve the use of **carbon credits**, it shall explain:
- (a) Whether and how these claims are accompanied by GHG **emission reduction targets** as required by Section 2 DR 12 (IR-4);
 - (b) Whether and how these claims and the reliance on carbon credits neither impede nor reduce the achievement of its GHG emission reduction targets⁶, or, if applicable, its net zero target; and
 - (c) The credibility and integrity of the carbon credits used, including by reference to recognised quality standards.

Disclosure Requirement E1-4– Anticipated financial effects from material physical and transition risks and potential climate-related opportunities

27. The undertaking shall disclose its:

- (a) anticipated financial effects from material *physical risks*;
- (b) anticipated financial effects from material *transition risks*.

28. The information required by paragraph 27 is in addition to the information on the current **financial effects** required under [draft] ESRS Section 2 SBM-3 para 37 (d). The objective of this Disclosure Requirement related to **anticipated financial effects** due to material **physical risks** and **transition risks** is to provide an understanding of how these risks have (or could reasonably be expected to have) a material influence on the undertaking's financial position, financial performance and cash flows, over the short-, medium- and long-term. If the undertaking uses **scenario analysis** to conduct resilience analysis, the results of such analysis should inform the assessment of anticipated financial effects from material physical and transition risks

29. The disclosure of **anticipated financial effects** from material **physical risks** required by paragraph 27 (a) shall include⁷:

- (a) the monetary amount and proportion (percentage) of assets at material physical risk over the short-, medium- and long-term before considering **climate change adaptation actions**; with the monetary amounts of these assets disaggregated by acute and chronic physical risk⁸;
- (b) the proportion of assets at material physical risk addressed by the **climate change adaptation actions**;
- (c) the location of significant assets at material physical risk⁹; and
- (d) the monetary amount and proportion (percentage) of net revenue from its business activities at material physical risk over the short-, medium- and long-term.

30. The disclosure of **anticipated financial effects** from material transition risks required by paragraph 27 (b) shall include:

- (a) the monetary amount and proportion (percentage) of assets at material transition risk over the short-, medium- and long-term before considering **climate mitigation actions**;
- (b) the proportion of assets at material transition risk addressed by the **climate change mitigation actions**;

⁶ This information is aligned with the Regulation (EU) 2021/1119 of the European Parliament and of the Council (EU Climate Law), Article 2 (1).

⁷ This information is aligned with the Commission Delegated Regulation (EU) 2020/1816 (Climate Benchmark Regulation), Annex II.

⁸ This disclosure requirement is consistent with the requirements included in EBA Pillar 3 ITS - [Template 5: Banking book - Climate change physical risk: Exposures subject to physical risk](#).

⁹ This disclosure requirement is consistent with the requirements included in EBA Pillar 3 ITS - [Template 5: Banking book - Climate change physical risk: Exposures subject to physical risk](#)

- (c) a breakdown of the carrying value of its real estate assets by energy-efficiency classes¹⁰;
 - (d) liabilities that may have to be recognised in financial statements over the short-, medium- and long-term; and
 - (e) the monetary amount and proportion (percentage) of net revenue from its business activities at material transition risk over the short-, medium- and long-term including, where relevant, the net revenue from the undertaking's customers operating in coal, oil and gas-related activities¹¹.
31. The undertaking shall disclose reconciliations to the relevant line items or notes in the financial statements of the following:
- (a) significant amounts of the assets and net revenue at material physical risk (as required by paragraph 29).
 - (b) significant amounts of the assets, liabilities, and net revenue at material transition risk (as required by paragraph 30).
32. The undertaking may disclose its potential to pursue material climate-related **opportunities**, to enable an understanding of how the undertaking may financially benefit from material climate-related opportunities. This disclosure is complementary to the key performance indicators to be disclosed in accordance with Commission Delegated Regulation (EU) 2021/2178.
33. For the disclosure of potential to pursue climate-related **opportunities**, the undertaking may consider¹²:
- (a) its expected cost savings from **climate change mitigation** and adaptation **actions**; and
 - (b) the potential market size or expected changes to net revenue from low-carbon products and services or adaptation solutions to which the undertaking has or may have access.

¹⁰ This disclosure requirement is consistent with the requirements included in EBA Pillar 3 ITS - [Template 2: Banking book - Climate change transition risk: Loans collateralised by immovable property - Energy efficiency of the collateral](#)

¹¹ This disclosure requirement is consistent with the requirements included in EBA Pillar 3 ITS - Template 2: Banking book - Climate change transition risk: Loans collateralised by immovable property - Energy efficiency of the collateral

¹² This information is aligned with the Commission Delegated Regulation (EU) 2020/1816 (Climate Benchmark Regulation), Annex II.

Pollution (E2)

Disclosure Requirements – Pollution (E2)

Disclosure Requirement E2-1– Pollution of air, water and soil

34. The undertaking shall disclose the pollutants that it emits through its own operations, as well as the microplastics it generates or uses.
35. The objective of this Disclosure Requirement is to provide an understanding of the undertaking's **emissions** to air, water and **soil** in its own operations and of its generation and use of microplastics.
36. The undertaking shall disclose the amounts of:
- (a) each pollutant listed in Annex II of Regulation (EC) No 166/2006 of the European Parliament and of the Council¹³ (European Pollutant Release and Transfer Register “E-PRTR Regulation” emitted to air, water and soil, with the exception of emissions of **GHGs** which are disclosed in accordance with [draft] LSME ESRS E1 Climate Change¹⁴;
 - (b) microplastics generated or used by the undertaking.
37. The undertaking shall put its disclosure into context and describe:
- (a) the changes over time,
 - (b) the measurement methodologies; and
 - (c) the process(es) to collect data for **pollution**-related accounting and reporting, including the type of data needed and the information sources.

Disclosure Requirement E2-2 – Substances of concern and substances of very high concern

38. The undertaking shall disclose information on the production, use, distribution, commercialisation and import/export of substances of concern and substances of very high concern on their own, in mixtures or in articles.
39. The objective of this Disclosure Requirement is to enable an understanding of the impact of the undertaking on health and the environment through **substances of concern** and through **substances of very high concern** on their own. It is also to enable an understanding of the undertaking's material risks and **opportunities** (voluntary), including exposure to those substances and risks arising from changes in regulations.
40. The disclosure required by paragraph 40 shall include the total amounts of **substances of concern** that are generated or used during the production or that are procured, and the total amounts of substances of concern that leave its facilities as emissions, as products, or as part of products or services split into main hazard classes of substances of concern.

¹³ Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC (OJ L 033 4.2.2006, p. 1)

¹⁴ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting an additional indicator related to principal adverse impacts as set out by indicator #2 in Table 2 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively “Emissions of air pollutants”); by indicator #8 in Table 1 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively “Emissions to water”); by indicator #1 in Table 2 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively “Emissions of inorganic pollutants”); by indicator #3 in Table 2 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively “Emissions of ozone-depleting substances”).

41. The undertaking shall present separately the information for the total amount of ***substances of very high concern***.

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Water and Marine Resources (E3)

Disclosure Requirements-Water and Marine Resources (E3)

Disclosure Requirement E3-1 – Water consumption

42. The undertaking shall disclose information on its water consumption performance related to its material impacts, risks, and opportunities (if the undertaking reports on opportunities on a voluntary basis).
43. The objective of this Disclosure Requirement is to provide an understanding of the undertaking's water consumption.
44. The disclosure required by paragraph 45 relates to own operations and shall include:
- (a) total water consumption in m³;
 - (b) total water consumption in m³ in areas at material water risk, including **areas of high-water stress**;
 - (c) total water recycled and reused in m³; ¹⁵
 - (d) total water stored and changes in storage in m³;
 - (e) any contextual information necessary regarding points (a) and (d), including the water basins' water quality and quantity, how the data have been compiled, such as any standards, methodologies, and assumptions used, including whether the information is calculated, estimated, modelled, or sourced from direct measurements, and the approach taken for this, such as of the use of any sector-specific sectors.
45. The undertaking shall provide information on its **water intensity**: total **water consumption** in its own operations in m³ per million EUR net revenue¹⁶.

¹⁵ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting an additional indicator related to principal adverse impacts as set out by indicator #6.2 in Table 2 of Annex 1 of the related Delegated Regulation regarding disclosure rules on sustainable investments (respectively "Water usage and recycling", 2. Weighted average percentage of water recycled and reused by investee companies).

¹⁶ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting an additional indicator related to principal adverse impacts as set out by indicator #6.1 in Table 2 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively "Water usage and recycling", 1. Average amount of water consumed by the investee companies (in cubic meters) per million EUR of revenue of investee companies).

Biodiversity and ecosystems (E4)

Disclosure Requirements-Biodiversity and ecosystems (E4)

Disclosure Requirement E4-1 – Impact metrics related to biodiversity and ecosystems change

46. The undertaking shall report metrics related to its material impacts on **biodiversity and ecosystems**.
47. The objective of this Disclosure Requirement is to enable an understanding of the performance of the undertaking against impacts identified as material in the **materiality assessment** on **biodiversity and ecosystems** change.
48. If the undertaking has identified owned, leased or managed **sites** located in or near **biodiversity-sensitive areas** which are negatively affected (see [draft] Section 2 AR 27) by the activity of those sites, the undertaking shall disclose the number and area (in hectares) of sites in or near these protected areas or key **biodiversity** areas.
49. If the undertaking has identified material impacts with regards to land-use change, or impacts on the extent and condition of **ecosystems**, it may also disclose their land-use based on a Life Cycle Assessment.
50. If the undertaking has concluded that it directly contributes to the **impact drivers of land-use change, water-use change and/ or sea-use change**, the undertaking shall report relevant **metrics**. The undertaking shall consider its own operations and may disclose metrics that measure:
- (a) the conversion over time (e.g., 1 or 5 years) of land cover (e.g., **deforestation** or mining);
 - (b) changes over time (e.g., 1 or 5 years) in the management of the ecosystem (e.g., through the intensification of agricultural management, or the application of better management practices or forestry harvesting);
 - (c) changes in the spatial configuration of the landscape (e.g., fragmentation of **habitats**, changes in ecosystem connectivity);
 - (d) changes in ecosystem structural connectivity (e.g., habitat permeability based on physical features and arrangements of habitat patches); and
 - (e) the functional connectivity (e.g., how well genes or individuals move through land, freshwater and seascape).
51. The undertaking may disclose additional **metrics** related to the introduction of **invasive** or **alien species** or the **ecosystem** condition and extent.

Resource use and Circular economy (E5)

Disclosure Requirements- Resource use and Circular Economy (E5)

Disclosure Requirement E5-1 – Resource inflows

- 52. The undertaking shall disclose information on its resource inflows related to its material impacts, risks and opportunities (opportunities are voluntary) in the undertaking's own operations and along the value chain.**
53. The objective of this Disclosure Requirement is to enable an understanding of the impacts and risks originating from the resource use in the undertaking's own operations and value chain.
54. When an undertaking assesses that resource inflows is a material sustainability matter, it shall disclose the following information about the materials used in its own operations to manufacture the undertaking's products and services during the reporting period, in tonnes or kilogrammes:
- (a) the overall total weight of products and technical and biological materials used during the reporting period;
 - (b) the percentage of biological materials that are sustainability certified as well as information on the certification scheme, and;
 - (c) the percentage of secondary materials (recycled or reused) used as inflow.
55. The undertaking shall provide information on the methodologies used to calculate the data. It shall specify whether the data is sourced from direct measurement or estimations, and disclose the key assumptions used.
56. The disclosure required by paragraph 52 shall include a description of its **resource inflows** where material: products (including **packaging**) and materials (specifying critical raw materials and rare earths), water and property, plant and equipment used in the undertaking's own operations and along its upstream value chain.
57. When an undertaking assesses that resource inflows is a material sustainability matter, it shall disclose the following information about the materials used to manufacture the undertaking's products and services during the reporting period, in tonnes or kilogrammes:
- (a) the overall total weight of products and technical and biological materials used during the reporting period;
 - (b) the percentage of biological materials (and biofuels used for non-energy purposes) used to manufacture the undertaking's products and services (including **packaging**) that is sustainably sourced, with the information on the certification scheme used and on the application of the cascading principle; and
 - (c) the weight in both absolute value and percentage, of secondary reused or recycled components, secondary intermediary products and secondary materials used to manufacture the undertaking's products and services (including packaging).

Disclosure Requirement E5-2 – Resource outflows

- 58. The undertaking shall disclose information on its material resource outflows, including waste, related to its material impacts, risks and opportunities (opportunities are voluntary).**
59. The objective of this Disclosure Requirements is to understand of how the undertaking contributes to **circular economy** through its product and material design in line with **circular economy** principles, as well as the undertaking's waste reduction and **waste management** strategy.

Products and materials

60. The undertaking shall provide a description of the key products and materials that come out of the undertaking's production process that are designed along circular economy principles.
61. The undertaking shall disclose the percentage of its products and services that are designed to be:
- (a) repairable and reused;
 - (b) recycled.

Waste

62. The undertaking shall disclose the total amount of waste generated in its own operations, as well as the percentage of non-recycled waste (by weight and on a wet basis)¹⁷.
63. The undertaking shall disclose the total amount of hazardous waste by:
- (a) type of hazardous, waste; and
 - (b) waste treatment type, in particular:
 - i. incineration;
 - ii. landfilling; and
 - iii. other disposal operations.
64. The undertaking shall also disclose the total amount of radioactive waste generated by the undertaking, where radioactive waste is defined in Article 3(7) of Council Directive 2011/70/Euratom¹⁸.
65. The undertaking shall provide contextual information, including information on the methodologies used to calculate the data and in particular the criteria and assumptions used to determine and classify products designed along circular principles.

¹⁷ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting an additional indicator related to principal adverse impacts as set out by indicator #13 in Table 2 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments (respectively "Non-recycled waste ratio").

¹⁸ Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (OJ L 199, 2.8.2011, p. 48). This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 because it is derived from a mandatory indicator related to principal adverse impacts as set out by indicator #9 in Table I of Annex I of Commission Delegated Regulation (EU) 2022/1288 with regard to disclosure rules on sustainable investments ("Hazardous waste and radioactive waste ratio").

Anticipated financial effects from material environmental-related matters other than climate (E6)

Disclosure Requirement E6 – Anticipated financial effects from material environmental-related matters other than climate

66. The undertaking shall disclose its anticipated financial effects of material impacts and risks related to pollution, water and marine resources, biodiversity and ecosystems and circular economy, when the respective matter is material.
67. The information required by paragraph 63 is in addition to the information on current financial effects on the entity's financial position, financial performance and cash flows for the reporting period required under Section 2 SBM-3 paragraph 37 (d).
68. The objective of this Disclosure Requirement is to provide an understanding of:
- (a) **anticipated financial effects** due to material risks arising from impacts and **dependencies** related to pollution, water and marine resources, biodiversity and ecosystems and circular economy, and how these risks have (or could reasonably be expected to have) a material influence on the undertaking's financial position, financial performance and cash flows over the short-, medium- and long-term; and
 - (b) on a voluntary basis, anticipated financial effects due to material opportunities related to pollution, water and marine resources, biodiversity and ecosystems and circular economy.
69. The disclosure required by paragraph 63 shall include:
- (a) a quantification of the **anticipated financial effects** in monetary terms, or where not possible without undue cost or effort qualitative information (for opportunities, such quantification is not required). The quantification of the anticipated financial effects in monetary terms may be a single amount or a range;
 - (b) a description of the effects considered, the related impacts and **dependencies** to which they relate and the time horizons in which they are likely to materialise; and
 - (c) the critical assumptions used to quantify the **anticipated financial effects**, as well as the sources and level of uncertainty attached to those assumptions.
70. For anticipated financial effects arising from material physical and transition risks, the undertaking shall refer to Disclosure Requirement E1-4 of this section.
71. For anticipated financial effects arising from material climate-related opportunities, the undertaking shall refer to Disclosure Requirement E1-4 of this section.

Appendix A: Application Requirements

This Appendix is an integral part of this section of this [draft] Standard. It supports the application of the requirements set for in paragraphs 1 to 74 and has the same authority as the other parts of this [draft] Standard.

Application Requirements-Climate Change E1

Disclosure Requirement E1-1 – Energy consumption and mix

Calculation guidance

AR 1. When preparing the information on energy consumption required under paragraph XX, the undertaking shall:

- (a) only report energy consumed from processes owned or controlled by the undertaking applying the same perimeter applied for reporting GHG Scopes 1 and 2 emissions;
- (b) exclude feedstocks and fuels that are not combusted for energy purposes. The undertaking that consumes fuel as feedstocks can disclose information on this consumption separately from the required disclosures;
- (c) ensure all quantitative energy-related information is reported in either Mega-Watt-hours (MWh) in Lower Heating Value or net calorific value. If raw data of energy-related information is only available in energy units other than MWh (such as Giga-Joules (GJ) or British Thermal Units (Btu)), in volume units (such as cubic feet or gallons) or in mass units (such as kilograms or pounds), they shall be converted to MWh using suitable conversion factors (see for example Annex II of the Fifth Assessment IPCC report). Conversion factors for fuels shall be made transparent and applied in a consistent manner;
- (d) ensure all quantitative energy-related information is reported as final energy consumption, referring to the amount of energy the undertaking actually consumes using for example the table in Annex IV of Directive 2012/27 of the European Parliament and of the Council²¹ on energy efficiency;
- (e) avoid double counting fuel consumption when disclosing self-generated energy consumption. If the undertaking generates electricity from either a non-renewable or renewable fuel source and then consumes the generated electricity, the energy consumption shall be counted only once under fuel consumption;
- (f) not offset energy consumption even if on *site* generated energy is sold to and used by a third party;
- (g) not count energy that is sourced from within the organisational boundary under “purchased or acquired” energy;
- (h) account for steam, heat or cooling received as “waste energy” from a third party’s industrial processes under “purchased or acquired” energy;

²¹ Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJL 315, 14.11.2012, p. 1).

- (i) account for renewable hydrogen²² as a renewable fuel. Hydrogen that is not completely derived from renewable sources shall be included under “fuel consumption from other non-renewable sources”; and
- (j) adopt a conservative approach when splitting the electricity, steam, heat or cooling between renewable and non-renewable sources based on the approach applied to calculate market-based Scope 2 GHG emissions. The undertaking shall only consider these energy consumptions as deriving from renewable sources if the origin of the purchased energy is clearly defined in the contractual arrangements with its **suppliers** (renewable power purchasing agreement, standardised green electricity tariff, market instruments like Guarantee of Origin from renewable sources in Europe²³ or similar instruments like Renewable Energy Certificates in the US and Canada, etc.).

AR 2. The information on Energy consumption and mix may be presented using the following tabular format.

Energy consumption and mix	Comparative	Year N
(1) Fossil energy consumption (MWh)		
(2) Consumption from nuclear sources (MWh)		
(3) Consumption from renewable sources (MWh)		
Total energy consumption (MWh) (calculated as the sum of lines 1, 2 and 3)		

AR 3. The total energy consumption with a distinction between fossil, nuclear and renewable energy consumption may be presented graphically in the **sustainability statement** showing developments over time (e.g., through a pie or bar chart).

Energy intensity based on net revenue

Calculation guidance

AR 4. When preparing the information on energy intensity required under paragraph 37, the undertaking shall:

²² Compliant with the requirements in delegated acts for hydrogen from renewable sources: Commission delegated regulation of 10 February 2023 supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council by establishing a Union methodology setting out detailed rules for the production of renewable liquid and gaseous transport fuels of non- biological origin; and Commission delegated regulation of 10 February 2023 supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council by establishing a minimum threshold for greenhouse gas emissions savings of recycled carbon fuels and by specifying a methodology for assessing greenhouse gas emissions savings from renewable liquid and gaseous transport fuels of non-biological origin and from recycled carbon fuel.

²³ Based on Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources.

- (a) calculate the energy intensity ratio using the following formula:
- $$\frac{\text{Total energy consumption from activities in high climate impact sectors (MWh)}}{\text{Net revenue from activities in high climate impact sectors (Monetary unit)}}$$
- (b) express the total energy consumption in MWh and the net revenue in monetary units (e.g., Euros);
- (c) the numerator and denominator shall only consist of the proportion of the total final energy consumption (in the numerator) and net revenue (in the denominator) that are attributable to activities in **high climate impact sectors**. In effect, there should be consistency in the scope of both the numerator and denominator;
- (d) calculate the total energy consumption in line with the requirement in paragraph 10;
- (e) calculate the net revenue in line with the accounting standards requirements applicable for the financial statements, i.e., IFRS 15 *Revenue from Contracts with Customers* or local GAAP requirements.

AR 5. The quantitative information may be presented in the following table.

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

Connectivity of energy intensity based on net revenue with financial reporting information

AR 6. The reconciliation of net revenue from activities in **high climate impact sectors** to the relevant financial statements line item or disclosure (as required by paragraph 40) may be presented either:

- (a) by a cross-reference to the related line item or disclosure in the financial statements; or
- (b) If the net revenue cannot be directly cross-referenced to a line item or disclosure in the financial statements, by a quantitative reconciliation using the below tabular format.

Net revenue from activities in high climate impact sectors used to calculate energy intensity	
Net revenue (other)	
Total net revenue (Financial statements)	

Disclosure Requirements E1-2 – Gross Scopes 1, 2, 3 and Total GHG emissions

Calculation guidance

AR 7. When preparing the information for reporting GHG **emissions** as required by paragraph 41, the undertaking shall:

- (a) consider the principles, requirements and guidance provided by the GHG Protocol Corporate Standard (version 2004). The undertaking may consider Commission Recommendation (EU) 2021/2279²⁴ or the requirements stipulated by ISO 14064-

²⁴ Commission Recommendation (EU) 2021/2279 of 15 December 2021 on the use of the Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organisations (OJ L 471, 30.12.2021, p.1).

- 1:2018. If the undertaking already applies the GHG accounting methodology of ISO 1:2018, it shall nevertheless comply with the requirements of this standard (e.g., regarding reporting boundaries and the disclosure of market-based Scope 2 GHG emissions);
- (b) disclose the methodologies, significant assumptions and emissions factors used to calculate or measure GHG emissions accompanied by the reasons why they were chosen, and provide a reference or link to any calculation tools used;
 - (c) include emissions of CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, and NF₃. Additional GHG may be considered when significant; and
 - (d) use the most recent **Global Warming Potential (GWP)** values published by the IPCC based on a 100-year time horizon to calculate CO₂eq emissions of non-CO₂ gases.
- AR 8. In line with Section 1 chapter 3.7, the undertaking shall disaggregate information on its GHG emissions as appropriate. For example, the undertaking may disaggregate its Scope 1, 2, 3, or total GHG **emissions** by country, operating segments, economic activity, subsidiary, GHG category (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃, and other GHG considered by the undertaking) or source type (stationary combustion, mobile combustion, process emissions and fugitive emissions).
- AR 9. An undertaking might have a different reporting period from some or all of the entities in its value chain. In such circumstances, the undertaking is permitted to measure its GHG emissions in accordance with paragraph XX using information for reporting periods that are different from its own reporting period if that information is obtained from entities in its value chain with reporting periods that are different from the undertaking's reporting period, on the condition that:
- (a) the undertaking uses the most recent data available from those entities in its value chain to measure and disclose its greenhouse gas emissions;
 - (b) the length of the reporting period is the same; and
 - (c) the undertaking discloses the effects of significant events and changes in circumstances (relevant to its GHG emissions) that occur between the reporting dates of the entities in its value chain and the date of the undertaking's general purpose financial statements.
- AR 10. When preparing the information on gross **Scope 1 GHG emissions** required under paragraph 26(a), the undertaking shall:
- (a) calculate or measure GHG emissions from stationary combustion, mobile combustion, process emissions and fugitive emissions; and use suitable activity data that include the non-renewable fuel consumption;
 - (b) use suitable and consistent emission factors;
 - (c) disclose biogenic emissions of CO₂ from the combustion or biodegradation of biomass separately from the Scope 1 GHG emissions, but include emissions of other types of GHG (in particular CH₄ and N₂O);
 - (d) not include any removals, or any purchased, sold or transferred **carbon credits** or GHG allowances in the calculation of Scope 1 GHG emissions;
 - (e) for activities reporting under the EU ETS, report on Scope 1 emissions following the EU ETS methodology. The EU ETS methodology may also be applied to activities in geographies and sectors that are not covered by the EU ETS;
- AR 11. When preparing the information on the percentage of Scope 1 GHG **emissions** from regulated emission trading schemes required under paragraph 26(b), the undertaking shall:
- (a) consider GHG emissions from the **installations** it operates that are subject to regulated Emission Trading Schemes (ETS), including the EU-ETS, national ETS and non-EU ETS, if applicable;

- (b) only include emissions of CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, and NF₃;
- (c) ensure the same accounting period for gross Scope 1 GHG emissions and GHG emissions regulated under the ETS; and
- (d) calculate the share by using the following formula:

$$\frac{\text{GHG emissions in (t CO}_2\text{eq) from EU ETS installations + national ETS installations + nonEU ETS installations}}{\text{Scope 1 GHG emissions (t CO}_2\text{eq)}}$$

AR 12. When preparing the information on gross Scope 2 GHG **emissions** required under paragraph 27, the undertaking shall:

- (a) consider the principles and requirements of the GHG Protocol Scope 2 Guidance (version 2015, in particular the Scope 2 quality criteria in chapter 7.1 relating to contractual instruments). It may also consider Commission Recommendation (EU) 2021/2279 or the relevant requirements for the quantification of **indirect GHG emissions** from imported energy in EN ISO 14064-1:2018;
- (b) include purchased or acquired electricity, steam, heat, and cooling consumed by the undertaking;
- (c) avoid double counting of GHG emissions reported under Scope 1 or 3;
- (d) apply the location-based, and, where applicable, market-based methods to calculate Scope 2 GHG emissions and provide information on the share and types of contractual instruments. Location-based method quantifies Scope 2 GHG emissions based on average energy generation emission factors for defined locations, including local, subnational, or national boundaries (GHG Protocol, "Scope 2 Guidance", Glossary, 2015). Market-based method quantifies Scope 2 GHG emissions based on GHG emissions emitted by the generators from which the reporting entity contractually purchases electricity bundled with instruments, or unbundled instruments on their own (GHG Protocol, "Scope 2 Guidance", Glossary, 2015); in this case, the undertaking may disclose the share of market-based scope 2 GHG emissions linked to purchased electricity bundled with instruments such as Guarantee of Origins or Renewable Energy Certificates. The undertaking shall provide information about the share and types of contractual instruments used for the sale and purchase of energy bundled with attributes about the energy generation or for unbundled energy attribute claims.
- (e) disclose biogenic emissions of CO₂ from the combustion or biodegradation of biomass separately from the Scope 2 GHG emissions but include emissions of other types of GHG (particularly CH₄ and N₂O). In case the emission factors applied do not separate the percentage of biomass or biogenic CO₂, the undertaking shall disclose this. In case GHG emissions other than CO₂ (particularly CH₄ and N₂O) are not available for, or excluded from, location-based grid average emissions factors or with the market-based method information, the undertaking shall disclose this; and
- (f) not include any removals, or any purchased, sold or transferred **carbon credits** or GHG allowances in the calculation of Scope 2 GHG emissions.

AR 13. When preparing the information on gross Scope 3 GHG **emissions** required under paragraph 30, the undertaking shall:

- (a) consider the principles and provisions of the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Version 2011); and it may consider Commission Recommendation (EU) 2021/2279 or the relevant requirements for the quantification of **indirect GHG emissions** from EN ISO 14064-1:2018;
- (b) if it is a financial institution, consider the GHG Accounting and Reporting Standard for the Financial Industry from the Partnership for Carbon Accounting Financial (PCAF), specifically part A "Financed Emissions" (version December 2022);
- (c) screen its total Scope 3 GHG emissions based on the 15 Scope 3 categories identified by the GHG Protocol Corporate Standard and GHG Protocol Corporate

Value Chain (Scope 3) Accounting and Reporting Standard (Version 2011) using appropriate estimates. Alternatively, it may screen its **indirect GHG emissions** based on the categories provided by EN ISO 14064-1:2018 clause 5.2.4 (excluding indirect GHG emissions from imported energy);

- (d) identify and disclose its significant Scope 3 categories based on the magnitude of their estimated GHG emissions and other criteria provided by GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Version 2011, p. 61 and 65-68) or ISO 14064-1:2018 Annex H.3.2, such as financial spend, influence, related **transition risks** and **opportunities** or **stakeholder** views;
- (e) calculate or estimate GHG emissions in significant Scope 3 categories using suitable emissions factors;
- (f) update Scope 3 GHG emissions in each significant category every year on the basis of current activity data; update the full Scope 3 GHG inventory at least every 3 years or on the occurrence of a significant event or a significant change in circumstances (a significant event or significant change in circumstances can, for example, relate to changes in the undertaking's activities or structure, changes in the activities or structure of its upstream and downstream value chain(s), a change in calculation methodology or in the discovery of errors);
- (g) disclose the extent to which the undertaking's Scope 3 GHG emissions are measured using inputs from specific activities within the entity's upstream and downstream value chain, and disclose the percentage of emissions calculated using primary data obtained from **suppliers** or other **value chain** partners;
- (h) for each significant Scope 3 GHG category, disclose the reporting boundaries considered, the calculation methods for estimating the GHG emissions as well as if and which calculation tools were applied. The Scope 3 categories should be consistent with the GHGP and include:
 - i. indirect Scope 3 GHG emissions from the consolidated accounting group (the parent and its subsidiaries),
 - ii. indirect Scope 3 GHG emissions from associates, joint ventures, and unconsolidated subsidiaries for which the undertaking has the ability to control the operational activities and relationships (i.e., operational control),
 - iii. Scope 1, 2 and 3 GHG emissions from associates, joint ventures, unconsolidated subsidiaries (investment entities) and joint arrangements for which the undertaking does not have **operational control** and when these entities are part of the undertaking's upstream and downstream value chain.
- (i) disclose a list of Scope 3 GHG emissions categories included in;
- (j) disclose biogenic emissions of CO₂ from the combustion or biodegradation of biomass that occur in its upstream and downstream **value chain** separately from the gross Scope 3 GHG emissions, and include emissions of other types of GHG (such as CH₄ and N₂O), and emissions of CO₂ that occur in the life cycle of biomass other than from combustion or biodegradation (such as GHG emissions from processing or transporting biomass) in the calculation of Scope 3 GHG emissions;
- (k) not include any removals, or any purchased, sold or transferred **carbon credits** or GHG allowances in the calculation of Scope 3 GHG emissions;

AR 14. When preparing the information on the total GHG **emissions** required under paragraph 49, the undertaking shall:

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

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

- (b) disclose total GHG emissions with a distinction between emissions derived from the location-based and market-based methods applied while measuring the underlying Scope 2 GHG emissions.

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AR 15. The undertaking shall disclose its total GHG **emissions** disaggregated by Scopes 1 and 2 and significant Scope 3 in accordance with the table below.

	Retrospective				Milestones and target years			
	Base year	Compa-rative	N	% N / N-1	2025	2030	(2050)	Annual % target / Base year
Scope 1 GHG emissions								
Gross Scope 1 GHG emissions (tCO ₂ eq)								
Percentage of Scope 1 GHG emissions from regulated emission trading schemes (%)								
Scope 2 GHG emissions								
Gross location-based Scope 2 GHG emissions (tCO ₂ eq)								
Gross market-based Scope 2 GHG emissions (tCO ₂ eq)								
Significant scope 3 GHG emissions*								
Total Gross indirect (Scope 3) GHG emissions (tCO ₂ eq)								
1 Purchased goods and services								
Optional sub-category: Cloud computing and data centre 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 travels								
7 Employee commuting								
8 Upstream leased assets								
9 Downstream transportation								
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								
Total GHG emissions								

Total GHG emissions (location-based) (tCO ₂ eq)									
Total GHG emissions (market-based) (tCO ₂ eq)									

- AR 16. The Scope 3 GHG **emissions** may also be presented by according to the indirect emission categories defined in EN ISO 14064-1:2018.
- AR 17. If it is material for the undertaking's Scope 3 emissions, it shall disclose the GHG **emissions** from purchased cloud computing and data centre services as a subset of the overarching **Scope 3 category** “upstream purchased goods and services”.
- AR 18. The total GHG **emissions** disaggregated by Scope 1, 2 and 3 GHG emissions may be graphically presented in the **sustainability statement** (e.g., as a bar or pie chart) showing the split of GHG emissions across the **value chain** (Upstream, Own operations, Transport, Downstream).

GHG intensity based on net revenue

Calculation guidance

AR 19. When disclosing the information on GHG intensity based on net revenue required under paragraph 32, the undertaking shall:

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

$$\frac{\text{Total GHG emissions (t CO}_2\text{eq)}}{\text{Net revenue (Monetary unit)}}$$
- (b) express the total GHG **emissions** in metric tonnes of CO₂eq and the net revenue in monetary units (e.g., Euros) and present the results for the market-based and location-based method;
- (c) include the total GHG emissions in the numerator and overall net revenue in the denominator;
- (d) calculate the total GHG emissions as required by paragraphs 22 (d) and 31; and
- (e) calculate the net revenue in line with the requirements in accounting standards applied for financial statements, i.e., IFRS 15 or local GAAP.

AR 20. The quantitative information may be presented in the following tabular format.

GHG intensity per net revenue	Comparative	N	% N / N-1
Total GHG emissions (location-based) per net revenue (tCO ₂ eq/Monetary unit)			
Total GHG emissions (market-based) per net revenue (tCO ₂ eq/Monetary unit)			

Connectivity of GHG intensity based on revenue with financial reporting information

AR 21. The reconciliation of the net revenue used to calculate GHG intensity to the relevant line item or notes in the financial statements (as required by paragraph 52) may be done by either:

- (a) a cross-reference to the related line item or disclosure in the financial statements; or
- (b) if the net revenue cannot be directly cross-referenced to a line item or disclosure in the financial statements, by a quantitative reconciliation using the below tabular format.

Net revenue used to calculate GHG intensity	
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Net revenue (other)	
Total net revenue (in financial statements)	

Disclosure Requirement E1-3 – GHG removals and GHG mitigation projects financed through carbon credits

GHG removals and storage in own operations and the upstream and downstream value chain

AR 22. In addition to their GHG emission inventories, undertakings shall provide transparency on how and to what extent they either enhance natural sinks or apply technical solutions to remove GHGs from the atmosphere in their own operations and upstream and downstream value chain. While there are no generally accepted concepts and methodologies for accounting for GHG removals, this [draft] Standard aims to increase transparency on the undertaking's efforts to remove GHGs from the atmosphere (paragraphs 33 and 35(b)). The GHG removals outside the **value chain** that the undertaking supports through the purchase of **carbon credits** are to be disclosed separately as required by paragraphs 33 and 35.

AR 23. When disclosing the information on **GHG removals and storage** from the undertaking's own operations and its upstream and downstream **value chain** required under paragraphs 33 and 35, for each removal and storage activity, the undertaking may describe:

- (a) the GHGs concerned;
- (b) whether removal and storage are biogenic or from **land-use change** (e.g., afforestation, reforestation, forest restoration, urban tree planting, agroforestry, building **soil** carbon, etc.), technological (e.g., direct air capture), or hybrid (e.g., bioenergy with CO₂ capture and storage) and technological details about the removal, the type of storage and, if applicable, the transport of removed GHGs;
- (c) if applicable, a brief explanation of whether the activity qualifies as a nature-based solution; and
- (d) how the risk of non-permanence is managed, including determining and monitoring leakage and reversal events, as appropriate.

Calculation guidance

AR 24. When preparing the information on **GHG removals and storage** from the undertaking's own operations and its upstream and downstream **value chain** required under paragraphs 33 and 35, the undertaking may:

- (a) consider, as far as applicable, the GHG Protocol Corporate Standard (version 2004), Product Standard (version 2011), Agriculture Guidance (version 2014), Land use, **land-use change**, and forestry Guidance for GHG project accounting (version 2006);
- (b) apply consensus methods on accounting for GHG removals as soon as they are available, notably the EU regulatory framework for the certification of CO₂ removals;
- (c) if applicable, explain the role of removals for its **climate change mitigation policy**;
- (d) include removals from operations that it owns or controls, or contributes to and that have not been sold to another party through carbon credits;
- (e) if applicable, mark those GHG removal activities in own operations or the value chain that have been converted into carbon credits and sold to other parties on the voluntary market;
- (f) account for the GHG **emissions** associated with a removal activity, including transport and storage, under Disclosure Requirement E1-3 (Scopes 1, 2 or 3). To increase transparency on the efficiency of a removal activity, including transport and storage, the undertaking may disclose the GHG emissions associated with this

activity (e.g., GHG emissions from electricity consumption of direct air capture technologies) alongside, but separately from, the amount of removed GHG emissions;

- (g) in case of a reversal, account for the respective GHG emissions as an offset for the removals in the reporting period;
- (h) use the most recent **GWP** values published by the IPCC based on a 100-year time horizon to calculate CO₂eq emissions of non-CO₂ gases and describe the assumptions made, methodologies and frameworks applied for calculation of the amount of GHG removals; and
- (i) consider nature-based solutions.

AR 25. The undertaking shall disaggregate and separately disclose the GHG removals that occur in its own operations and those that occur in its upstream and downstream value chain. GHG removal activities in the upstream and downstream **value chain** shall include those that the undertaking is actively supporting, for example, through a cooperation project with a **supplier**. The undertaking is not expected to include any GHG removals that may occur in its upstream and downstream value chain that it is not aware of.

AR 26. The quantitative information on GHG removals may be presented by using the following tabular format.

Removals	Comparative	N	% N / N-1
<i>GHG removal activity 1 (e.g., forest restoration)</i>	-		
<i>GHG removal activity 2 (e.g., direct air capture)</i>	-		
...	-		
Total GHG removals from own operations (tCO₂eq)			
<i>GHG removal activity 1 (e.g., forest restoration)</i>	-		
<i>GHG removal activity 2 (e.g., direct air capture)</i>	-		
...	-		
Total GHG removals in the upstream and downstream value chain (tCO₂eq)			
Reversals (tCO₂eq)			

GHG mitigation projects financed through carbon credits

AR 27. Financing GHG **emission reduction** projects outside the undertaking's **value chain** through purchasing **carbon credits** that fulfil high-quality standards can be a useful contribution towards mitigating climate change. This [draft] Standard requires the undertaking to disclose whether it uses **carbon credits** separately from the GHG **emissions** (paragraphs 33 and 36) and GHG **emission reduction targets** (Section 3 [draft] LSME ESRS). It also requires the undertaking to show the extent of use and which quality criteria it uses for those carbon credits.

AR 28. When disclosing the information on **carbon credits** required under paragraphs 33 and 36, the undertaking shall disclose the following disaggregation as applicable:

- (a) the share (percentage of volume) of reduction projects and removal projects;
- (b) for carbon credits from removal projects, an explanation whether they are from biogenic or technological sinks;
- (c) the share (percentage of volume) for each recognised quality standard;
- (d) the share (percentage of volume) issued from projects in the EU; and
- (e) the share (percentage of volume) that qualifies as a corresponding adjustment under Article. 6 of the Paris Agreement.

Calculation guidance

AR 29. When preparing the information on **carbon credits** required under paragraphs 53(b) and 56, the undertaking shall:

- (a) Consider recognised quality standards;
- (b) if applicable, explain the role of carbon credits in its **climate change mitigation policy**;
- (c) not include carbon credits issued from GHG **emission reduction** projects within its **value chain** as the respective GHG emission reductions shall already be disclosed under Disclosure Requirement E1-3 (Scope 2 or Scope 3) at the time they occur (i.e., double counting is avoided);
- (d) not include carbon credits from GHG removal projects within its value chain as the respective GHG removals may already be accounted for under Disclosure Requirement E1-4 at the time they occur (i.e., double counting is avoided);
- (e) not disclose carbon credits as an offset for its GHG **emissions** under Disclosure Requirement E1-6 on GHG emissions;
- (f) not disclose carbon credits as a means to reach the GHG emission reduction targets disclosed under Disclosure Requirement E1-4; and
- (g) calculate the amount of carbon credits to be cancelled in the future, as the sum of carbon credits in metric tonnes of CO₂eq over the duration of existing contractual agreements.

AR 30. The information on **carbon credits** cancelled in the reporting year and planned to be cancelled in the future may be presented using the following tabular formats.

Carbon credits cancelled in the reporting year	Comparative	N
Total (tCO ₂ eq)		
Share from removal projects (%)		
Share from reduction projects (%)		
Recognised quality standard 1 (%)		
Recognised quality standard 2 (%)		
Recognised quality standard 3 (%)		

...		
Share from projects within the EU (%)		
Share of carbon credits that qualify as corresponding adjustments (%)		

Carbon credits planned to be cancelled in the future	Amount until [period]
Total (tCO ₂ eq)	

Disclosure Requirement E1-4 – Anticipated financial effects from material physical and transition risks and potential climate-related opportunities

Anticipated financial effects from material physical and transition risks

AR 31. Material climate-related **physical risks** and **transition risks** may affect the undertaking's financial position (e.g., owned assets, financially-controlled leased assets, and liabilities), performance (e.g., potential future increase/decrease in net revenue and costs due to business interruptions, increased supply prices resulting in potential margin erosions), and cash flows. The low probability, high severity and long-term time horizons of some climate-related physical risk exposures and the uncertainty arising from the transition to a sustainable economy mean that there will be associated material **anticipated** financial effects that are outside the scope of the requirements of applicable accounting standards.

AR 32. Currently, there is no commonly accepted methodology to assess or measure how material **physical risks** and **transition risks** may affect the undertaking's future financial position, financial performance and cash flows. Therefore, the disclosure of the financial effects (as required by paragraphs 45, 46 and 47) will depend on the undertaking's internal methodology and the exercise of significant judgement in determining the inputs, and assumptions needed to quantify and where applicable describe the **anticipated financial effects**.

Calculation guidance - Anticipated financial effects from material physical risks

AR 33. When disclosing the information required under paragraphs 37(a) and 39, the undertaking shall explain whether and how:

- (a) it assessed the **anticipated financial effects** for assets and business activities at material physical risk, including the scope of application, time horizons, calculation methodology, critical assumptions and parameters and limitations of the assessment; and
- (b) the assessment of assets and business activities considered to be at material **physical risk** relies on or is part of the process to determine material physical risk as required under paragraphs 18(b) and AR 12 and to determine climate **scenarios** as required under paragraphs 19 and AR 13 to AR 14. In particular, it shall explain how it has defined medium- and long-term time horizons and how these definitions are linked to the expected lifetime of the undertaking's assets, strategic planning horizons and capital allocation plans.

AR 34. When preparing the information on assets at material physical risk that is required to be disclosed under paragraph 37(a), the undertaking shall:

- (a) Calculate the assets at material physical risk in terms of monetary amount and as a proportion (percentage) of total assets at the reporting date (i.e., the proportion is an estimate of the carrying value of assets at material physical risk divided by total carrying value as stated in the statement of financial position or balance sheet). The

estimate of assets at material physical risk shall be derived starting from the assets recognised in the financial statements. The estimate of monetary amounts and proportion of assets at physical risk may be presented as either a single amount or range.

- (b) All types of assets including finance-lease / right-of-use assets shall be considered when determining the assets at material physical risk.
- (c) To contextualise this information, the undertaking shall:
 - i. disclose the location of its significant assets at material physical risk. Significant assets located²⁵ in the EU territory shall be aggregated by NUTS codes 1 level digits (Nomenclature of Territorial Units for Statistics). For significant assets located outside EU territory, the breakdown by NUTS code will only be provided where applicable.
 - ii. disaggregate the monetary amounts of assets at risk by acute and chronic physical risk²⁶.
- (d) calculate the share of assets at material physical risk resulting from paragraph AR 42 (a) that is addressed by the **climate change adaptation actions** based on the information disclosed under Disclosure Requirement 11 (IR-3) – Policies and actions in relation to sustainability matters (Section 3).

AR 35. When preparing the information required under paragraph 45(a), the undertaking may assess and disclose the share of net revenue from business activities at physical risk. This disclosure:

- (a) shall be based on the net revenue in line with the requirements in accounting standards applied for financial statements, i.e., IFRS 15 or local GAAP.
- (b) may include a breakdown of the undertaking's business activities with the corresponding details of the associated percentage of total net revenue, the risk factors (hazards, exposure and sensitivity) and, if possible, the magnitude of the **anticipated financial effects** in terms of margin erosion over the short-, medium- and long-term time horizons. The nature of business activities may also be disaggregated by operating segments if the undertaking has disclosed the contribution of margins by operational segments in its segment reporting in the financial statements.

Calculation guidance - Anticipated financial effects from transition risk

AR 36. When disclosing the information required under paragraphs 33(b) and 36, the undertaking shall explain whether and how:

- (a) it has assessed the potential effects on future financial performance and position for assets and business activities at material transition risk, including the scope of application, calculation methodology, critical assumptions and parameters, and limitations of the assessment; and
- (b) the assessment of assets and business activities considered to be at material transition risk relies on or is part of the process to determine material **transition risks** as described under paragraphs 18(c) and AR 12 and to determine **scenarios** as required under paragraphs AR 13 to AR 14. In particular, it shall explain how it has defined medium- and long-term time horizons and how these definitions are linked to the expected lifetime of the undertaking's assets, strategic planning horizons and capital allocation plans.

AR 37. When disclosing the information on assets at material transition risk as required under paragraphs 40(a) and (b):

²⁵ This disclosure requirement is consistent with the requirements of EBA Pillar 3 ITS- [Template 5 exposures subjects to physical risk](#)

²⁶ Ibid

- (c) the undertaking shall at the very least include an estimate of the amount of potentially stranded assets (in monetary amounts and as a proportion/percentage) from the reporting year until 2030 and from 2030 to 2050. Stranded assets are understood as the active or firmly planned key assets of the undertaking with significant **locked-in GHG emissions** over their operating lifetime. Firmly planned key assets are those that the undertaking will most likely deploy within the next five years. The amount may be expressed as a range of asset values based on different climate and **policy scenarios**, including a scenario aligned with limiting climate change to 1.5°C.
- (d) the undertaking may disclose a breakdown of the carrying value of its real estate assets, including rights-of-use assets, by energy efficiency classes. The energy efficiency shall be represented in terms of either the ranges of energy consumption in kWh/m² or the EPC²⁷ (Energy Performance Certificate)²⁸ label class. If the undertaking cannot obtain this information on a best-effort basis, it shall disclose the total carrying amount of the real estate assets for which the energy consumption is based on internal estimates.
- (e) the undertaking shall calculate the proportion (percentage) of total assets (including finance lease/right-of-use assets) at material transition risk addressed by the **climate change mitigation actions** based on the information disclosed under Disclosure Requirement E1-3. The total assets amount is the carrying amount on the balance sheet as of the reporting date.

AR 38. When disclosing the information on potential liabilities from material **transition risks** required under paragraph 40(d):

- (a) undertakings that operate **installations** regulated under an emission trading scheme may include a range of potential future liabilities originating from these schemes;
- (b) undertakings subject to the EU ETS, may disclose the potential future liabilities that relate to their allocation plans for the period before and until 2030. The potential liability may be estimated on the basis of:
 - i. the number of allowances held by the undertaking at the beginning of the reporting period;
 - ii. the number of allowances to be purchased in the market yearly, i.e., before and until 2030;
 - iii. the gap between estimated future **emissions** under various transition **scenarios** and free allocations of allowances that are known for the period until 2030; and
 - iv. the estimated yearly cost per tonne of CO₂ for which an allowance needs to be purchased;
- (c) In assessing its potential future liabilities, the undertaking may consider and disclose the number of Scope 1 GHG emission allowances within regulated emission trading schemes and the cumulative number of emission allowances stored (from previous allowances) at the beginning of the reporting period;
- (d) undertakings disclosing volumes of **carbon credits** planned to be cancelled in the near future (Disclosure Requirement E1-7) may disclose the potential future liabilities associated with those based on existing contractual agreements;
- (e) the undertaking may also include its monetised gross Scope 1, 2 and total GHG **emissions** (in monetary units) calculated as follows:

²⁷ Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (OJ L 153, 18.6.2010, p. 13).

²⁸ This disclosure requirement is consistent with the requirements of EBA Pillar 3 ITS- Template 2 immovable property, energy efficiency of the collateral

- v. monetised Scope 1 and 2 GHG emissions in the reporting year by the following formula:

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

- vi. monetised total GHG emissions in the reporting year by the following formula:

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

- vii. by use of a lower, middle and upper cost rate²⁹ for GHG emissions (e.g., market carbon price and different estimates for the societal costs of carbon) and reasons for selecting them.

AR 39. Other approaches and methodologies may be applied to assess how **transition risks** may affect the future financial position of the undertaking. In any case, the disclosure of **anticipated financial effects** shall include a description of the methodologies and definitions used by the undertaking.

AR 40. When preparing the information required under paragraph 63(d), the undertaking may assess and disclose the share of net revenue from business activities at **transition risks**. This disclosure:

- (a) shall be based on the net revenue in line with the requirements in accounting standards applied for financial statements, i.e., IFRS 15 or local GAAP.
- (b) may include a breakdown of the undertaking’s business activities with the corresponding details of the associated percentage of current net revenue, risk factors (events and exposure), and when possible, the **anticipated financial effects** related to margin erosion over the short-, medium- and long-term. The nature of business activities may also be disaggregated by operating segments if the undertaking has disclosed the contribution of margins by operational segments in its segment reporting in the financial statements.

Connectivity with financial reporting information

AR 41. The reconciliation of the significant amount of assets, liabilities, and net revenue (vulnerable to either material **physical risks** or **transition risks**) to the relevant line item or disclosure (e.g., in segment reporting) in the financial statements (as required by paragraph 65) may be presented by the undertaking as follows:

- (a) as a cross-reference to the related line item or disclosure in the financial statements if these amounts are identifiable in the financial statements; or
- (b) If these cannot be directly cross-referenced, as a quantitative reconciliation of each to the relevant line item or disclosure in the financial statement using the below tabular format:

Carrying amount of assets or liabilities or net revenue vulnerable to either material physical or transition risks	
Adjusting items	
Assets or liabilities or net revenue in the financial statements	

²⁹ The cost rate is the factor used to convert non-monetary impacts like tonnes, hectares, m3 etc. into monetary units. Cost rates should be based on monetary valuation studies, need to be science-based and the methods used to obtain them transparent. Guidance on these methods can be obtained, e.g., from the EU-LIFE project, TRANSPARENT (see recital (38) of the draft CSRD).

- AR 42. The undertaking shall ensure the consistency of data and assumptions to assess and report the **anticipated financial effects** from material **physical risks** and **transition risks** in the sustainability statement with the corresponding data and assumptions used for the financial statements (e.g., carbon prices used for assessing impairment of assets, the useful life of assets, estimates and provisions). The undertaking shall explain the reasons for any inconsistencies (e.g., if the full financial implications of climate-related risks are still under assessment or are not deemed material in the financial statements).
- AR 43. For potential future effects on liabilities (as required by paragraph 64(d)), if applicable, the undertaking shall cross-reference the description of the emission trading schemes in the financial statements.

Climate-related opportunities

- AR 44. When disclosing the information under paragraph 43, the undertaking may explain the nature of the cost savings (e.g., from reduced energy consumption), the time horizons and the methodology used, including the scope of the assessment, critical assumptions, and limitations, and whether and how **scenario analysis** was applied.
- AR 45. When disclosing the information required under paragraph 43, the undertaking may explain how it has assessed the market size or any expected changes to net revenue from low-carbon products and services or adaptation solutions including the scope of the assessment, the time horizon, critical assumptions, and limitations and to what extent this market is accessible to the undertaking. The information on the market size may be put in perspective to the current taxonomy-aligned revenue disclosed under the provisions of Regulation (EU) 2020/852. The entity may also explain how it will pursue its climate-related **opportunities** and, where possible, this should be linked to the disclosures on **policies, targets and actions** under Disclosure Requirements E1-2, E1-3 and E1-4.

Application Requirements-Pollution (E2)

Disclosure Requirement E2-1 – Pollution of air, water and soil

- AR 46. The information to be provided on microplastics under paragraph 27(e) shall include microplastics that have been generated or used during production processes or that are procured, and that leave the undertaking's facilities as emissions, as products, or as part of products or services. Microplastics may be unintentionally produced when larger pieces of plastics like car tires or synthetic textiles wear and tear or may be deliberately manufactured and added to products for specific purposes (e.g., exfoliating beads in facial or body scrubs).
- AR 47. The volume of **pollutants** shall be presented in appropriate mass units, for example in tonnes or kilogrammes.
- AR 48. The information required under this Disclosure Requirement shall be provided at the level of the reporting undertaking. However, the undertaking may disclose additional breakdown including information at **site** level or a breakdown of its **emissions** by type of source, by sector or by geographical area.

Contextual information

- AR 49. When providing contextual information on the emissions, the undertaking may consider:
- the local air quality indices (AQI) for the area where the undertaking's air **pollution** occurs;
 - the degree of urbanisation (DEGURBA)³⁰ for the area where air pollution occurs; and
 - the undertaking's percentage of the total **emissions** of **pollutants** to water and **soil** occurring in areas at water risk, including areas of high-water stress;
- AR 50. The information provided under this Disclosure Requirement may refer to information the undertaking is already required to report under other existing legislation (i.e., IED, E-PRTR, etc.).
- AR 51. Where the undertaking's activities are subject to Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions (IED)³¹ and relevant Best Available Techniques Reference Documents (**BREFs**), irrespective of whether the activity takes place within the European Union or not, the undertaking may disclose the following additional information:
- a list of **installations** operated by the undertaking that fall under the IED and EU **BAT Conclusions**;
 - a list of any non-compliance **incidents** or enforcement **actions** necessary to ensure compliance in case of breaches of permit conditions;
 - the actual performance, as specified in the EU-**BAT conclusions** for industrial **installations**, and comparison of the undertaking's environmental performance against "emission levels associated with the best available techniques" the (**BAT-AEL**) as described in EU-BAT conclusions;

³⁰ According to Eurostat, the Degree of urbanisation (DEGURBA) is a classification that indicates the character of an area. Based on the share of local population living in urban clusters and in urban centres, it classifies Local Administrative Units (LAU or communes) into three types of area: i) Cities (densely populated areas), ii) Towns and suburbs (intermediate density areas), and iii) Rural areas (thinly populated areas).

³¹ Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17).

- (d) the actual performance of the undertaking against “environmental performance levels associated with the **best available techniques (BAT-AEPLs)** provided that they are applicable to the sector and **installation**; and
- (e) a list of any compliance schedules or derogations granted by competent authorities according to Art. 15(4) Directive 2010/75/EU that are associated with the implementation of **BAT-AELs**.

Methodologies

AR 52. When providing information on **pollutants**, the undertaking shall consider approaches for quantification in the following order of priority:

- (a) direct measurement of emissions, effluents or other **pollution** through the use of recognised continuous monitoring systems (e.g., AMS Automated Measuring Systems);
- (b) periodic measurements;
- (c) calculation based on **site**-specific data;
- (d) calculation based on published pollution factors; and
- (e) estimation.

AR 53. Regarding the disclosure of methodologies required by paragraph 1, the undertaking shall consider:

- (a) whether its monitoring is carried out in accordance with EU **BREF** Standards or another relevant reference benchmark; and
- (b) whether and how the calibration tests of the AMS were undertaken and the verification of periodic measurement by independent labs were ensured.

AR 54. The amounts referred in paragraph 35 shall include the emissions from those facilities over which the undertaking has financial control and those over which it has operational control. It shall include only the emissions from facilities for which the applicable threshold value specified in Annex II of Regulation (EC) No 166/2006 is exceeded.

AR 55. When disclosing the information required under paragraph 36, when an inferior methodology compared to direct measurement of **emissions** is chosen to quantify emissions, the reasons for choosing this inferior methodology shall be outlined by the undertaking. If the undertaking uses estimates, it shall disclose the standard, sectoral study or sources which form the basis of its estimates, as well as the possible degree of uncertainty and the range of estimates reflecting the measurement uncertainty.

Disclosure Requirement E2-2 – Substances of concern and substances of very high concern

List of substances to be considered

AR 56. In order for the information to be complete, **substances** in the undertaking’s own operations and those procured shall be included (e.g., embedded in ingredients, semi-finished products, or the final product).

AR 57. The volume of **pollutants** shall be presented in mass units, for example tonnes or kilogrammes or other mass units appropriate for the volumes and type of pollutants being released.

Contextual information

AR 58. The information provided under this Disclosure Requirement may refer to information the undertaking is already required to report under other existing legislation (i.e., Directive 2010/75/EU, Regulation (EC) No 166/2006 “E-PRTR”, etc.).

Application Requirements-Water and Marine Resources (E3)

Disclosure Requirement E3-1 – Water consumption

AR 59. When disclosing contextual information on water management performance required by paragraph 42, the undertaking shall explain the calculation methodologies and more specifically the share of the measure obtained from direct measurement, from sampling and extrapolation, or from best estimates.

Application Requirements-Biodiversity and ecosystems (E4)

Disclosure Requirement E4-1 – Impact metrics related to biodiversity and ecosystems change

AR 60. When preparing the information required under this Disclosure Requirement, the undertaking shall briefly describe the **metrics** and methodologies used including:

- (a) why these were selected;
- (b) their organizational scope (undertaking, site, brand, commodity, corporate business unit, activity), operational scope (entire value chain, upstream or downstream value chain, or own operations and leased assets) and geographical scope (geographies covered by the metrics);
- (c) if metrics are species specific or ecosystem specific;
- (d) an indication of which actions are measured and monitored via the metrics and how they relate to the achievement of targets.

AR 61. The undertaking may also disclose:

- (a) how the metrics integrate **ecological thresholds** (e.g., the biosphere integrity and land-system change planetary boundaries) and allocations;
- (b) the frequency of monitoring, key indicators being monitored, and the baseline condition/value and baseline year/period, as well as the reference period;
- (c) other methodological aspects such as if the parametrisation of these metrics rely on primary data, secondary data, modelled data or on expert judgement, or a mixture of these;
- (d) whether metrics are mandatory (based on legislation) or voluntary. If they are mandatory, the undertaking may consider listing the relevant legislation; if voluntary, refer to the voluntary standard/procedure used; and
- (e) whether the metrics are informed by or correspond to expectations or recommendations of relevant and authoritative national, EU-level or intergovernmental guidelines, policies, legislation or agreements, such as the Convention for Biological Diversity (CBD) and IPBES.

AR 62. Methodologies available to collect data and measure the undertakings' impacts on **biodiversity** and **ecosystems** may be separated into three categories as follows:

- (a) primary data: collected in-situ using on the ground surveys;
- (b) secondary data: including geospatial data layers that are overlaid with geographic location data of business activities:
 - i. at the species level, data layers on the ranges of different species can be used to predict the species that may be present at different locations. This includes operation **sites** and sourcing locations. Different range layers will have differing levels of accuracy depending on certain factors (e.g., whether

- species ranges have been refined based on availability of **habitat**). Information on the threat status of the species, and the activities that threaten them, can provide an indication of the likely contribution that business activities may be having on driving population trends and threat status;
- ii. at the ecosystem level, data layers reflecting change in the extent and condition of ecosystems can be applied, including levels of **habitat fragmentation** and connectivity;
 - (c) modelled biodiversity state data: Model-based approaches are commonly used for measuring ecosystem level indicators (e.g., extent, condition, or function). Models quantify how the magnitude of different pressures affects the state of biodiversity. These are referred to as pressure-state relationships and are based on globally collected data. Modelling results are applied locally to estimate how undertaking-level pressures will cause changes in ecosystem condition. An impact driver generally has three main characteristics: magnitude (e.g., amount of contaminant, noise intensity), spatial extent (e.g., area of land contaminated) and temporal extent (duration of persistence of contaminant).
- AR 63. With regard to life cycle assessment for land-use, the undertaking may refer to the “Land-use related environmental indicators for Life Cycle Assessment” by the Joint Research Center.
- AR 64. With regard to the introduction of invasive alien species, the undertaking may disclose the pathways and number of **invasive alien species** and the extent of surface covered by invasive alien species.
- AR 65. With regard to metrics on the extent and condition of **ecosystems**, useful guidance can be found in the work of the United Nations System of Environmental Economic Accounting Ecosystem Accounting (UN SEEA EA).
- AR 66. The undertaking may disclose in units of area (e.g., m² or ha) on land-use using guidance provided by the Eco-Management and Audit Scheme (EMAS)³²:
- (a) total use of land;
 - (b) total sealed area;
 - (c) total nature-oriented area on **site**; and
 - (d) total nature-oriented area off site.
- AR 67. The undertaking may disclose, for example, land cover change, which is the physical representation of the drivers “habitat modification” and “industrial and domestic activities”, i.e., the man-made or natural change of the physical properties of Earth’s surface at a specific location.
- AR 68. Land cover is a typical variable that can be assessed with earth observation data.
- AR 69. When reporting on material impacts related to the **ecosystems**, the undertaking may, in addition to the extent and condition of ecosystems, also consider the functioning of ecosystems by using:
- (a) a metric that measures a process or function that the ecosystem completes, or that reflects the ability of the ecosystem to undertake that specific process or function: e.g., net primary productivity, which is a measure of plant productivity based on the rate at which energy is stored by plants and made available to other species in the ecosystem. It is a core process that occurs for ecosystems to function. It is related to

³² As proposed by the 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).

many factors, such as species diversity, but does not measure these factors directly;
or

- (b) a metric that measures changes to the population of scientifically identified species under threat.

AR 70. At the ecosystem level, data layers reflecting change in the extent and condition of **ecosystems** may be applied, including levels of **habitat fragmentation** and connectivity.

Application Requirements- Resource use and Circular Economy (E5)

Disclosure Requirement E5-1 – Resource inflows

- AR 71. The disclosure required by paragraph 57 on a description of resource inflows used in the undertaking's own operations and along its upstream value chain, may distinguish between: a) materials, including: i) raw materials, distinguishing between critical raw materials and rare earths; ii) associated process materials; iii) semi-manufactured goods or parts; b) products, including several categories such as packaging, IT equipment, textiles, furniture, buildings, heavy machinery, mid-weight machinery, light machinery, heavy transport, mid-weight transport, light transport and warehousing equipment; c) water; c) property, plant and equipment. When describing the relevant resource inflows that generate IROs the undertaking shall explain what type it is referring to, for example to raw materials (e.g. wood, ores), products (e.g. machinery) or goods or semi-manufactured goods or parts used as input into its products and services (e.g. electronic components).
- AR 72. When the undertaking is subject to paragraph 31, it may also provide transparency on the materials that are sourced from by-products/waste stream (e.g., offcuts of a material that has not previously been in a product).
- AR 73. The denominator of the percentage indicator required under paragraphs 31(b) and 31(c) is the overall total weight of materials used during the reporting period.
- AR 74. The reported usage data are to reflect the material in its original state, and not to be presented with further data manipulation, such as reporting it as "dry weight".
- AR 75. In cases where there is an overlap between categories of reused, recycled, the undertaking shall specify how double counting was avoided and the choices that were made.

Disclosure Requirement E5-2 - Resource outflows

- AR 76. Products and materials information to be provided under paragraph 58 refer to all products and materials that come out of the undertaking's production process and that a company puts on the market (including packaging).
- AR 77. The undertaking may disclose its engagement in product end-of-life waste management, for example through extended producer responsibility schemes or take-back schemes.
- AR 78. When considering the waste streams relevant to its sectors or activities, the undertaking may consider the list of waste descriptions from the European Waste Catalogue.
- AR 79. Examples of other types of disposal operations under paragraph 63 (iii) can be found in Annex I of Directive 2008/98/EC (Waste Framework Directive).
- AR 80. When providing contextual information under paragraph 64 the undertaking may:
- (a) explain the reasons for high weights of waste directed to disposal (e.g., local regulations that prohibit landfilling of specific types of waste);
 - (b) describe sector practices, sector standards, or external regulations that mandate a specific disposal operation; and

- (c) specify whether the data has been modelled or sourced from direct measurements, such as waste transfer notes from contracted waste collectors.

Application Requirements - Anticipated financial effects from material environmental-related matters impacts and risks other than climate (E6)

Disclosure Requirement E6 – Anticipated financial effects from material environmental-related matters other than climate

- AR 81. The undertaking may include an assessment of its related products and services at risk over the short-, medium- and long-term, explaining how these are defined, how financial amounts are estimated, and which critical assumptions are made.
- AR 82. The quantification of the **anticipated financial effects** in monetary terms under paragraph 68(a) may be a single amount or a range.
- AR 83. The undertaking may to consider as part of its anticipated financial effects related with pollution:
- a) the operating and capital expenditures related to **incidents** and **deposits** may include for instance: i) cost for eliminating and remediating the respective **pollution** of air, water and **soil** including environmental protection; ii) damage compensation costs including payment of fines and penalties imposed by regulators or government authorities.
 - b) Costs related to the management of **incidents** which may include for instance interruptions of production, whether arising from the **supply chain** and/or from own operations, which resulted in **pollution**.

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