

EXPOSURE DRAFT

ESRS E5

Resource use and circular economy

November 2022



[Draft] ESRS E5 *Resource use and circular economy*

**DRAFT AS OF 15 NOVEMBER 2022 PREPARED
SOLELY FOR APPROVAL BY THE EFRAG SRB
AND STILL SUBJECT TO EDITORIAL REVIEW
BEFORE IT IS FINALLY ISSUED**

[DISCLAIMER]

[Draft] ESRS E5 Resource use and circular economy is set out in paragraphs 1–45 and Appendices A: Defined terms and B: Application requirements. All the paragraphs including Appendices A and B, have equal authority. Each Disclosure Requirement is stated in a bold paragraph and has a paragraph that illustrates the objective to be followed in the preparation of the respective disclosures. The [draft] Standard also uses terms defined in other [draft] ESRS and should be read in the context of its objective.

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Objective

1. The objective of this [draft] Standard is to specify disclosure requirements which will enable users of the sustainability statements to understand:
 - (a) how the undertaking affects resource use, including the depletion of non-renewable resources and the regenerative production of renewable resources (referred to in this [draft] standard as “resource use and circular economy”) in terms of positive and negative material actual or potential adverse impacts;
 - (b) any actions taken, and the result of such actions, to prevent, mitigate or remediate actual or potential adverse impacts arising from resource use and circular economy, including its measures to help decoupling its economic growth from the use of materials;
 - (c) any plans and capacity of the undertaking to adapt its business model and operations in line 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;
 - (d) the nature, type and extent of the undertaking’s material risks and opportunities related to the undertaking’s impacts and dependencies, arising from resource use and circular economy, and how the undertaking manages them;
 - (e) the effects of risks and opportunities, related to the undertaking’s impacts and dependencies on resource use and circular economy, on the undertaking’s development, performance and position over the short, medium and long term and therefore on its ability to create enterprise value.
2. This [draft] Standard derives from the [draft] Corporate Sustainability Reporting Directive stating that the sustainability reporting standards shall specify information to disclose about “resource use and circular economy”.
3. This Standard sets out disclosure requirements related to “resource use” and “circular economy” and in particular on:
 - (a) resource inflows including the circularity of material resource inflows, considering renewable and non-renewable resources;
 - (b) resource outflows including information on products and materials and waste.
4. Circular economy means an economic system whereby the value of products, materials and other resources in the economy is maintained for as long as possible, enhancing their efficient use in production and consumption, thereby reducing the environmental impact of their use, minimising waste and the release of hazardous substances at all stages of their life cycle, including through the application of the waste hierarchy. The goal is to maximise and maintain the value of the resources, products and materials by creating a system that allows for renewability, long life optimal use or re-use, refurbishment, remanufacturing, recycling and biodegradation.
5. This [draft] Standard also builds on existing EU legislative frameworks and policies which are referred to in this Standard: the EU Green Deal, Regulation (EU) 2019/2088 (SFDR), Regulation (EU) 2020/852 (the EU Taxonomy), EU Circular Economy Action Plan¹, the Waste Framework directive and the EU industrial strategy.
6. To evaluate the transition from a “business as usual” to a circular economic system, this [draft] Standard relies on the identification of resources, materials and products physical flows used by the undertaking through Disclosure Requirement E5-4 Resource inflows and Disclosure Requirement E5-5 Resource outflows.

Interactions with other ESRS

7. Resource use and circular economy is closely connected to other environmental sub-topics such as climate change, pollution, water and marine resources and biodiversity. A circular economy is a system that tends towards a sustainable production and consumption. In doing so, the

¹ https://ec.europa.eu/environment/strategy/circular-economy-action-plan_en

system brings multiple environmental benefits, in particular, the reduction of energy consumption and emissions into the air (greenhouse gas emissions or other pollution), the limitation of water withdrawals and discharges and the regeneration of nature limiting the impact on biodiversity.

8. Thus, to provide a comprehensive overview of what could be material to resource use and circular economy, relevant disclosure requirements are covered in other environmental standards as follows:
 - (a) ESRS E1 *Climate change*, which addresses in particular GHG emissions and energy resources (energy consumption);
 - (b) ESRS E2 *Pollution*, which addresses in particular emissions to water, air and soil as well as substances of concern;
 - (c) ESRS E3 *Water and marine resources*, which addresses in particular water resource (water consumption) and marine resources;
 - (d) ESRS E4 *Biodiversity and ecosystems*, which addresses in particular ecosystems and species and raw materials.
9. This [draft] Standard covers an environmental sub-topic, however as people benefit from nature, the undertaking' impacts on nature affect communities. Material negative impacts on affected communities from resource use and circular economy related impacts attributable to the undertaking are covered in ESRS S3 *Affected communities*.
10. The contents of this [draft] Standard on general disclosures, as well as impact, risk and opportunity management shall be read in conjunction with cross-cutting standard ESRS 2 *General disclosures*.

Disclosure Requirements

ESRS 2 General disclosures

Disclosure Requirement related to ESRS 2 IRO-1 – Description of the processes to identify and assess material sustainability impacts, risks and opportunities

11. The undertaking shall describe the process to identify material impacts, risks and opportunities related to resource use and circular economy and, in particular, shall provide information on:
 - (a) the methodologies and tools used to screen its assets and activities in order to identify its actual and potential risks in its own operations and value chain;
 - (b) the interconnection between risks and opportunities arising from impacts and dependencies;
 - (c) the process for conducting consultations and in particular with affected communities².

Impact, risk and opportunity management

Disclosure Requirement E5-1 – Policies related to resource use and circular economy

12. **The undertaking shall disclose its policies implemented to manage its material impacts, risks and opportunities related to resource use and circular economy.**
13. The objective of this Disclosure Requirement is to provide an understanding of the extent to which the undertaking has policies that address the identification, assessment, management and/or remediation of its material impacts, risks and opportunities related to resource use and circular economy.

² Source: IFC Performance Standard 6, 2012.

14. The summarised description of the policy shall contain the information required in ESRS 2 CCR-1 *Policies adopted to manage material sustainability matters*.
15. In the summary, the undertaking shall indicate whether and how its policies address the following areas where material:
 - (a) transition away from extraction of virgin non-renewable resources;
 - (b) implement practices that secure and contribute to the regenerative production of renewable resources and the regeneration of ecosystems they are part of.
16. Policies shall address material impacts, risks and opportunities in its own operations and along the upstream and downstream value chain.

Disclosure Requirement E5-2 – Actions and resources in relation to resource use and circular economy

17. **The undertaking shall disclose its resource use and circular economy actions and the resources allocated to their implementation.**
18. The objective of this Disclosure Requirement is to provide an understanding of the key actions taken and planned to achieve the resource use and circular economy related policy's objectives and targets.
19. The description of the resource use and circular economy-related action and resources allocated shall follow the principles defined in ESRS 2 CCR-2 *Actions and resources in relation to material impacts, risks and opportunities*.
20. In addition to ESRS 2 CCR-2, the undertaking shall specify whether and how an action and resources cover:
 - (a) one of the layer of the waste hierarchy as defined in Appendix A;
 - (b) or a more detailed circular economy strategy throughout the value chain of the product: Refuse, Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture and Repurpose), Recycle.³
21. The disclosure shall also include a description of the actions, including circularity measures, taken to prevent waste generation in the undertaking's upstream and downstream value chain and to manage significant impacts arising from waste generated.

Metrics and targets

Disclosure Requirement E5-3 – Targets related to resource use and circular economy

22. **The undertaking shall disclose the resource use and circular economy-related targets it has adopted.**
23. The objective of this Disclosure Requirement is to provide an understanding of the targets the undertaking has adopted to support its resource use and circular economy policy and address its material impacts, risks and opportunities.
24. The description of the targets shall contain the information requirements defined in ESRS 2 CCR-3 *Tracking effectiveness of policies and actions through metrics and targets*.
25. The disclosure required by paragraph 22 shall indicate whether and how its targets relate to inflows and outflows including waste and products and materials (including in production, use phase and at end of functional life) and more specifically to:
 - (a) the increase of circular design (including for instance product design);
 - (b) the increase of circular material use rate;

³ [Categorisation system for the circular economy - Publications Office of the EU \(europa.eu\)](https://european-council.europa.eu/media/en/press-communications/infographic/infographic_circular_economy_en.pdf)

- (c) the minimisation of virgin non-renewable raw material with possibly targets for virgin non-renewable raw material and targets for virgin renewable raw material; and
 - (d) the reversal of the depletion of the stock of renewable resources;
 - (e) the waste management, including preparation for proper treatment;
 - (f) other targets.
26. The undertaking shall specify to which layer of the waste hierarchy the target relates.
27. In addition to ESRS 2 CCR-3, the undertaking shall specify whether (local) ecological thresholds and organisation-specific allocations were taken into consideration when setting targets. If so, the undertaking should specify:
- (a) the ecological threshold identified and whether the threshold is organisation specific;
 - (b) the methodology used to identify the threshold; and
 - (c) how responsibility for respecting these thresholds is allocated to the organisational level.
28. The undertaking shall specify if and how (local) legal requirements were taken into account when considering ecological thresholds.

Disclosure Requirement E5-4 – Resource inflows

29. **The undertaking shall disclose information on its material resource inflows.**
30. The objective of this Disclosure Requirement is to provide an understanding of the resource use in the course of the undertaking's own operations and value chain.
31. The disclosure required by paragraph 29 shall include a description of its material inflows: products (including packaging) and materials, and property, plant and equipment used in the undertaking's own operations and along the value chain.
32. For undertakings for which inflows are material and those active in one of 'key products value chain' as defined in the EU Circular Economy action plan⁴ the undertaking shall include in tonnes on the reporting period:
- (a) the overall total weight of products and materials used during the reporting period;
 - (b) the weight in both absolute value and percentage of renewable input materials from regenerative sources used to manufacture the undertaking's products and services (including packaging); and
 - (c) the weight in both absolute value and percentage, of reused or recycled products and materials (*non-virgin*) used to manufacture the undertaking's products and services (including packaging).
33. The undertaking shall provide information on the methodologies used to calculate the data. It shall in particular specify whether the data is sourced from direct measurement or estimations and disclose the key assumptions used.

Disclosure Requirement E5-5 – Resource outflows

34. **The undertaking shall disclose information on its material resource outflows, including waste.**
35. The objective of this Disclosure Requirements to provide an understanding of:
- (a) how the undertaking contributes to circular economy by i) designing products and materials in line with circular principles and ii) the extent to which products, materials and waste processing are recirculated in practice after first use;
 - (b) the undertaking's waste management strategy and the extent to which the undertaking knows how its waste is managed in its own activities.

⁴ [A new Circular Economy Action Plan \(europa.eu\)](https://european-council.europa.eu/media/en/press-room/pages/press-room.aspx?pid=14787)

Products and materials

36. The undertaking shall provide a description of the key products and materials that come out of the undertaking's production process and that are designed along circular principles, including durability, reusability, repairability, disassembly, remanufacturing, refurbishment, recycling or other optimisation of the use of the resource.
37. The undertaking for which outflows are material and those active in one of 'key products value chain' as defined in the EU Circular Economy action plan⁵, shall provide information on the reporting period on:
- (a) the total weight (tonnes) and percentage of materials that come out of the undertaking's products and services production process (including packaging) that have been designed along circular principles:
 - i. durability;
 - ii. reusability;
 - iii. repairability;
 - iv. disassembly;
 - v. remanufacturing or refurbishment;
 - vi. recycling;
 - vii. recirculation by the biological cycle; and
 - viii. other potential optimisation of product and material use;
 - (b) the weight and percentage of products and materials that come out of the undertaking including packaging that, even if they do not meet the requirement required by paragraph 35(a), are designed to enhance/enable circular economy for customers further down the value chain.

Waste

38. The undertaking shall disclose the following information on its total amount of waste on its own operations on the reporting period, in tonnes or kilogrammes:
- (a) the total amount of waste generated;
 - (b) for each type of hazardous and non-hazardous waste, the amount by weight diverted from disposal by recovery operation type and the total amount summing all three types. The recovery operation types to be reported on are:
 - i. preparation for reuse;
 - ii. recycling; and
 - iii. other recovery operations;
 - (c) for each type of hazardous and non-hazardous waste, the amount by weight directed to disposal by waste treatment type and the total amount summing all three types. The waste treatment types to be reported are:
 - i. incineration;
 - ii. landfilling; and
 - iii. other disposal operations;
 - (d) the total amount and percentage of non-recycled waste⁶.

⁵ [EU's Circular Economy Action Plan \(CEAP\)](#)

⁶ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting an additional principal adverse impact 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.

39. When reporting composition of the waste, the undertaking shall specify⁷:
- (a) the waste streams, relevant to its sector or activities (e.g., tailings for an undertaking in the mining sector, electronic waste for an undertaking in the consumer electronics sector, or food waste for an undertaking in the agriculture or in the hospitality sector); and;
 - (b) the materials that are present in the waste (e.g., biomass, metals, non-metallic minerals, plastics, textiles).
40. The undertaking shall also disclose the total amount of hazardous waste and radioactive waste generated by the undertaking, where radioactive waste is defined in Article 3(7) of Council Directive 2011/70/Euratom⁸.
41. The undertaking shall provide contextual 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 under paragraph 37(a). It shall in particular specify whether the data is sourced from direct measurement or estimations and disclose the key assumptions used. **Error! Reference source not found. Error! Reference source not found.**

Disclosure Requirement E5-6 – Potential financial effects from resource use and circular economy-related impacts, risks and opportunities

42. **The undertaking shall disclose its potential financial effects of material risks and opportunities arising from resource use and circular economy -related impacts.**
43. The objective of this Disclosure Requirement is to provide information on:
- (a) potential negative material financial effects due to risks arising from resource use and circular economy -related impacts is to provide an understanding of how these risks may affect the undertaking's financial performance and position over the short-, medium, and long-term.
 - (b) potential positive financial effects due to opportunities arising from resource use and circular economy -related material impacts is to allow an understanding of how the undertaking may financially benefit from material resource use and circular economy -related opportunities.
44. The disclosure shall include:
- (a) a quantification of the potential financial effects in monetary terms, or where impracticable qualitative information. For financial effects arising from opportunities, a quantification is not required if it would result in disclosure that does not meet the qualitative characteristics of information (see ESRS 1 Appendix C);
 - (b) a description of the effects considered, the impacts to which they relate and the time horizon in which they are likely to materialise;
 - (c) the critical assumptions used in the estimate, as well as the sources and level of uncertainty attached to those assumptions.
45. In the context of this Disclosure Requirement, potential financial effects include financial effects that do not meet the recognition threshold for inclusion in the financial statement line items and notes to the financial statements.

⁷ This datapoint reflects information proposed under GRI 306.

⁸ This information supports the information needs of financial market participants subject to Regulation (EU) 2019/2088 as reflecting a mandatory principal adverse impact as set out by indicator #9 in Table 1 of Annex 1 of the related Delegated Regulation with regard to disclosure rules on sustainable investments.

Appendix A: Defined terms

This appendix is an integral part of the [draft] ESRS E5 and has the same authority as the other parts of the [draft] ESRS Standard.

Associated process materials	Materials that are needed for the manufacturing process but are not part of the final product, such as lubricants for manufacturing machinery.
Business as usual	In the context of this standard, business as usual is to be understood as a scenario where the undertaking does not take significant actions to shift away its business model from a linear economy, i.e. an economy in which finite resources are extracted to make products that are used - generally not to their full potential - and then thrown away ('take-make-waste'), leading to waste, pollution, and the degradation of natural systems.
By-product	A substance or object resulting from a production process the primary aim of which is not the production of that substance or object is considered not to be waste, but to be a by-product if the following conditions are met: (a) further use of the substance or object is certain; (b) the substance or object can be used directly without any further processing other than normal industrial practice; (c) the substance or object is produced as an integral part of a production process; and (d) further use is lawful, i.e. the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts. (EU Waste Framework Directive)
Circular economy	An economic system whereby the value of products, materials and other resources in the economy is maintained for as long as possible, enhancing their efficient use in production and consumption, thereby reducing the environmental impact of their use, minimising waste and the release of hazardous substances at all stages of their life cycle, including through the application of the waste hierarchy.
Circular economy principles	The circular economy is based on three principles, driven by design: (i) eliminate waste and pollution; (ii) circulate products and materials at their highest value; and (iii) regenerate nature. (Ellen MacArthur Foundation)
Circularity enabler	The services, products or Business models that enable circular systems to be created including cross value chain initiatives.
Circular material use rate	Recirculation of materials, components and products in practice after first use employing the following strategies (in order of preference): - maintenance/prolonged use; - reuse/redistribution; - refurbishment/remanufacturing; - recycling, composting, or anaerobic digestion. The use rate is defined as the ratio of circular use of materials to overall use of materials.
Durability	The ability of a product, component or material to remain functional and relevant when used as intended.
Ecological (or socio-ecological) breakpoint or threshold	The point at which a relatively small change in external conditions causes a rapid change in an ecosystem. When an ecological threshold has been passed, the ecosystem may no longer be able to return to its state by means of its inherent resilience. (IPBES online glossary)

Hazardous/ non-hazardous waste	Hazardous (non-hazardous) waste means waste which displays one or more of the hazardous properties listed in Annex III of the Waste framework directive.
Incineration with (without) energy recovery	Incineration is the controlled burning of waste at high temperature. It is with energy recovery when the energy created in the combustion process is harnessed for re-use, for example for power generation. It is without energy recovery when the heat generated by combustion is dissipated in the environment.
Landfill	A waste disposal site for the deposit of the waste onto or into land ⁹ .
Linear economy	An economy in which finite resources are extracted to make products that are used - generally not to their full potential - and then thrown away ('take-make-waste'), leading to waste, pollution, and the degradation of natural systems.
Longevity	Designed for maintenance and durability in such a way that encourages longer use than the industry standard in practice and at scale and in such a way that does not compromise circular treatment at the end of functional life. (Circulytics Definition List)
Non-renewable material	Resources that are not able to be renewed or replenished on timescales relevant to the economy, i.e., not geological timescales, such as minerals, metals, oil, gas or coal. (Source: GRI 301 and BS 8001 Circular Economy and EMF)
Packaging	Products made of any materials of any nature to be used for the containment, protection, handling, delivery, [storage, transport] and presentation of goods, from raw materials to processed goods, from the producer to the user or consumer ¹⁰ .
Primary products	Grown, harvested or extracted raw materials. (inspired by GRI 306: Waste 2020)
Recovery	Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. ¹¹ .
Recyclable materials	Materials which may be collected, separated or processed and returned to the economic mainstream in the form of secondary raw materials or products.
Recycling	Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.
Regeneration	Promotion of self-renewal capacity of natural systems with the aim of reactivating ecological processes damaged or over-exploited by human action (Ellen MacArthur Foundation)
Regenerative production	Regenerative production is an approach to managing agroecosystems that provides food and material — be it through agriculture, aquaculture or forestry — in ways that create positive outcomes for nature. These outcomes include, but are not limited to, healthy soils, improved air and water quality, and higher levels of carbon sequestration. They can be achieved through a variety of context-dependent practices and can

⁹ See art. 2 (g) of the Directive 1999/31/EC of the European Parliament and of the Council of 26 April 1999.

¹⁰ See art. 3 (1) of Directive 94/62/EC of the European Parliament and of the Council of 20 December 1994

¹¹ See art. 3 (15) of directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008

	together help regenerate degraded ecosystems and build resilience on farms and in surrounding landscapes.
Renewable materials	Material that is derived from resources that are quickly replenished by ecological cycles or agricultural processes, so that the services provided by these and other linked resources are not endangered and remain available for the next generation. (GRI 301: Materials 2016)
Resource use optimisation	The design, production and distribution of materials and products with the objective to keep them in use at their highest value. Eco-design and design for longevity, repair, reuse, repurposing, disassembly, remanufacturing are examples of tools to prevent from a quick and limited use of materials and products.
Resource inflows	Resource that enters the organisation's infrastructure. (inspired by Circulytics Definitions List)
Resource outflows	Resource that leaves the organisation's infrastructure. (inspired by Circulytics Definitions List)
Reuse	Any operation by which products and components that are not waste are used again for the same purpose for which they were conceived ¹² . This may involve cleaning or small adjustments so it is ready for the next use without significant definition. (Circulytics Definitions List)
Waste	Any substance or object which the holder discards or intends or is required to discard. (Article 3(1) of Directive 2008/98/EC of the European Parliament and of the Council)
Waste hierarchy	The waste hierarchy is the following priority order in waste prevention and management: (a) prevention; (b) preparing for re-use; (c) recycling; (d) other recovery, e.g. energy recovery; and (e) disposal ¹³ .
Waste management	The collection, transport, recovery and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker ¹⁴ .

¹² See art. 3 (13) of the Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008.

¹³ See art. 4 (1) of the Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008.

¹⁴ See art. 3 (9) of the Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008.

Appendix B: Application Requirement

This appendix is an integral part of the proposed [draft] ESRS E5 *Resource use and circular economy*. It describes the application of the requirements set for in paragraphs 1–45 and has the same authority as the other parts of the [draft] ESRS Standard.

ESRS 2 General disclosures

Disclosure requirement related to ESRS 2 IRO-1 – Description of the processes to identify and assess material sustainability impacts, risks and opportunities

- AR 1. When conducting a materiality assessment on environmental subtopics, the undertaking shall consider the four phases below, also known as the LEAP approach, proposed by the Taskforce on Nature-Related Financial Disclosures:
- (a) locate where in the own operations and along the value chain happen the interface with nature are the priority locations;
 - (b) evaluate the resource use and circular economy-related dependencies and impacts;
 - i. assess the material risks and opportunities;
 - ii. prepare and report the results of the materiality assessment.
- AR 2. The materiality assessment for ESRS E5 corresponds to the first three phases of this LEAP approach, the fourth phase addresses the outcome of the process. Further guidance and materials about this approach can be found in TNFD Nature-Related Risk & Opportunity Management and Disclosure Framework.
- AR 3. The process to assess the materiality of impacts, dependencies, risks and opportunities shall consider the provisions in ESRS 2 IRO-1 and IRO-2.
- AR 4. The sub-topics covered by the materiality assessment under ESRS E5 include:
- (a) the contribution to direct impact drivers (Resource use other than water use or raw materials (considered respectively under ESRS E3 and ESRS E4);
 - (b) dependencies on ecosystem services.
- AR 5. Under paragraph AR 1 (a), the undertaking shall consider first **locating** where there are areas at risks for inflows, but also for outflows and in particular circular economy strategies and waste treatment in its own operations and along the value chain.
- AR 6. Under paragraph AR 1(b) the undertaking shall then consider **evaluating** impacts and dependencies. When disclosing information under paragraph AR 1 the undertaking may rely on primary, secondary or modelled data collection or other relevant approaches to assess material impacts, dependencies, risks and opportunities.
- AR 7. Based on the results of Phase 1 and 2, the undertaking shall finally consider **assessing** under paragraph AR 1i material risks and opportunities by:
- (a) identifying transition risks and opportunities in its own operations and its upstream and downstream value chain by the category, including the risk of staying in a business as usual scenario:
 - i. policy and legal, e.g bans on the extraction and use of non-renewable resources;
 - ii. technology;
 - iii. market;
 - iv. reputation (use of raw materials);
 - (b) identifying physical risks including depletion of stock and use of virgin and non-virgin renewable resources, decrease of virgin and non-virgin renewable resources;

- (c) identifying opportunities categorized by^{15,16}:
- i. resource efficiency: e.g. transition to more efficient services and processes requiring less resources, eco-design for longevity, repair, reuse, recycle, by-products, take-back systems, decoupling activity from extraction of materials, intensifying circular material use; practices to ensure products and materials are collected, sorted, and reused, repaired, refurbished, remanufactured;
 - ii. markets: e.g. development of less resource-intensive products and services, diversification of business activities, new business models such as product-as-a-service, pay-per-use, sharing, leasing);
 - iii. financing: e.g. access to green funds, bonds or loans;
 - iv. resilience: e.g. diversification of resources and business activities (e.g. start a new business unit on ecosystem regeneration), investing in green infrastructures, adopting recycling and circularity mechanisms that reduce the dependencies, capability of the undertaking to safeguard future stocks and flows of resources; and
 - v. reputation.

AR 8. When assessing material impacts, risks and opportunities, the undertaking shall consider the sub-subtopics of resource use and circular economy:

- (a) resource inflows as regards the circularity of material resource inflows, considering separately renewable and non-renewable resources;
- (b) resource outflows including products and materials and waste taking into account the waste hierarchy;
- (c) resource use optimisation as regards the intensity of materials and products use;
- (d) the creation of circular systems including cross value chain initiatives;
- (e) waste management (hazardous and non-hazardous wastes) while specifying the potential adverse or beneficial other environmental impacts (climate change, water, pollution, biodiversity).

AR 9. The undertaking may consider the following methodologies to assess its impacts, risks and opportunities on its own operations and along its value chain: product and/or Organizational Environmental Footprint (PEF, OEF), Material Flow Analysis (MFA), Life Cycle Assessment.

AR 10. When providing information on the outcome of the materiality assessment, the undertaking shall consider:

- (a) a list of business units associated to resource use and circular economy material impacts, risks and opportunities in the context of the products and services of the undertaking and the waste it generates;
- (b) a list and prioritisation of the material resources used by the undertaking;
- (c) the material impacts and risks of staying in business as usual;
- (d) the material opportunities related to a circular economy;
- (e) the material impacts and risks of a transition to a circular economy; and
- (f) the stages of the value chain where resource use, risks and negative impacts are concentrated.

¹⁵ Source: TNFD, 2022, p.37

¹⁶ Source: CDSB Biodiversity Application Guidance 2021

Impact, risk and opportunity management

Disclosure Requirement E5-1 – Policies related to resource use and circular economy

- AR 11. The policies described under this Disclosure Requirement may be integrated in broader environmental or sustainability policies covering different subtopics.
- AR 12. When providing information on its policies, the undertaking shall consider whether and how its policies address:
- (a) the waste hierarchy: (a) prevention; (b) preparing for re-use; (c) recycling; (d) other recovery, e.g. energy recovery; and (e) disposal. In this context, the waste treatment cannot be considered as a recovery;
 - (b) the prioritization of strategies to avoid or minimise waste (Refuse, Rethink, Reduce, Re-use, Repair, Refurbish, Remanufacture and Repurpose) over waste treatment strategies (Recycling). The concepts of eco-design¹⁷, waste as a resource or post-consumer waste (at the end of a consumer-product lifecycle), should also be taken in consideration.
- AR 13. When defining its policies, the undertaking may consider the Paper on ‘Categorisation system for the circular economy’¹⁸, which describes circular design and production models, circular use models, circular value recovery models and circular support along the principles of the nine circular economy “R” strategies or principles: refuse, rethink, reduce, re-use, repair, refurbish, remanufacture, repurpose and recycle.

Disclosure Requirement E5-2 – Actions and resources in relation to resource use and circular economy

- AR 14. When providing information under paragraph 21 and considering that resources are shared and that circular economy strategies may require collective actions, the undertaking may specify the actions taken to engage with its upstream and downstream value chain and/or its local ecosystem on the development of collaborations or initiatives increasing the circularity of products and materials.
- AR 15. In particular, the undertaking may specify the following:
- (a) how it contributes to circular economy, including for instance smart waste collection systems;
 - (b) the other stakeholders involved in the collective actions: competitors, suppliers, retailers, customers, other business partners, local communities and authorities, government agencies;
 - (c) a description of the organisation of the project including the specific contribution of the undertaking and the roles of the different stakeholders in the project: sponsors and other participants.
- AR 16. The actions may cover the own operations and/or the value chain.

Metrics and targets

Disclosure Requirement E5-3 - Targets related to resource use and circular economy

- AR 17. When determining (local) ecological thresholds to set targets, the undertaking may refer to the guidance provided by the Science-Based Targets Initiative for Nature (SBTN) or any other guidance with a scientifically acknowledged methodology that allows to set science-based targets by identifying ecological thresholds and, if applicable, organisation-specific allocations.

¹⁷ As established by the Directive 2009/125/EC

¹⁸ [Categorisation system for the circular economy - Publications Office of the EU \(europa.eu\)](#)

- AR 18. When providing information on targets, the undertaking shall prioritise targets in absolute value.
- AR 19. The increased circular material use rate to be provided under paragraph 25 (b) is to be understood as additional, i.e. based on the development of secondary material sources or the production of circular products for example.
- AR 20. When providing information on targets related to virgin renewable raw material under paragraph 25(c), the undertaking shall consider how those targets may impact biodiversity loss, also in light of ESRS E4.
- AR 21. The undertaking may disclose other targets under paragraph 25(f) including in relation to sustainable sourcing. If so, the undertaking shall explain the definition of sustainable sourcing it has adopted and how it relates to the objective set out in paragraph 23.
- AR 22. The targets may cover own operations and/or the value chain.

Disclosure Requirement E5-4 - Resource inflows

- AR 23. Resource inflows indicators refer to all products and materials used for production and packaging of products and services including materials (raw, associated process materials, and semi-manufactured goods or parts), products, packaging, plant property and equipment. It may cover the following categories: IT equipment, textiles, furniture, buildings, heavy machinery, mid-weight machinery, light machinery, heavy transport, mid-weight transport, light transport and warehousing equipment.
- AR 24. The list of 'key products value chain' as defined in the EU Circular Economy¹⁹ mentioned in paragraph 32 is the following:
- (a) electronics and ICT;
 - (b) batteries and vehicles;
 - (c) packaging;
 - (d) plastics;
 - (e) textiles;
 - (f) construction and buildings;
 - (g) food, water and nutrients.
- AR 25. When an undertaking is subject to paragraph 32, 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 26. The denominator of the percentage indicator required under paragraphs 32(b) and 32(c) is the overall total weight of materials used during the reporting period.
- AR 27. 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 28. In cases where reused, recycled, renewable categories overlap, the undertaking shall specify how double counting was avoided and choices that were made.

Disclosure Requirement E5-5 - Resource outflows

Products and materials

- AR 29. Products and materials information to be provided under paragraph 36 refer to all materials and products that come out of the undertaking's production process and that a company puts on the market (including packaging).

¹⁹ [A new Circular Economy Action Plan \(europa.eu\)](https://european-council.europa.eu/media/en/press-communications/infographic/infographic_circular_economy_action_plan_en.pdf)

- AR 30. When compiling the percentage indicator, the undertaking shall use as denominator the overall total weight of materials used during the reporting period.
- AR 31. Products and services referred to in paragraph 37(b) may cover for instance:
- (a) prevention of waste and pollution by customers (e.g., smart waste collection system);
 - (b) increase of the longevity of other products further down in the value chain;
 - (c) increase recycling yield (quantity and quality) of products further down in the value chain (e.g. materials that separate adhesives from cardboard);
 - (d) decrease the level of post-consumer waste.
- AR 32. The undertaking may also provide information on its products and materials that are actually recirculated in practice through strategies described under paragraphs 37 (a) ii to 37 (a) v.

Waste

- AR 33. Type of waste is to be understood as hazardous or non-hazardous waste for instance. Some specific waste, such as radioactive waste, may also be presented as a separate type.
- AR 34. 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 35. Examples of other types of recovery operations under paragraph 38(b)iii may be found in Annex II of the Waste framework directive²⁰.
- AR 36. Examples of other types of disposal operations under paragraph 38(c) iii may be found in Annex I of the Waste framework directive (dumping, open burning, or deep well injection for example).
- AR 37. When providing contextual information under paragraph 41 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.

Disclosure Requirement E5-6 – Potential financial effects from resource use and circular economy-related impacts, risks and opportunities

- AR 38. The quantification of the potential financial effects in monetary terms under paragraph 44(a) may be a figure or a range of figures.
- AR 39. When providing information under paragraph 44(b), the undertaking may illustrate and describe the business model to strengthen value retention.
- AR 40. 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.

²⁰ [Waste framework directive](#)



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