

This paper has been prepared by the EFRAG Secretariat for discussion at a public meeting of EFRAG FR and SR TEG. The paper forms part of an early stage of the development of a potential EFRAG position. Consequently, the paper does not represent the official views of EFRAG or any individual member of the EFRAG FRB or EFRAG FR TEG. The paper is made available to enable the public to follow the discussions in the meeting. Tentative decisions are made in public and reported in the EFRAG Update. EFRAG positions, as approved by the EFRAG FRB, are published as comment letters, discussion or position papers, or in any other form considered appropriate in the circumstances.

## Examples Development Considerations – Updated Roadmap

### Introduction and Objective

- 1 The objective of this paper is to provide EFRAG FR and SR TEG with an overview of the approach being taken in developing examples as part of the EFRAG research project on connectivity between financial reporting and sustainability reporting (the connectivity project).
- 2 At the EFRAG CAP meeting and joint EFRAG FR TEG and SR TEG meetings held in October 2023, it was agreed that illustrative examples would be a core component of a Discussion Paper, which is the main deliverable of the EFRAG research project on connectivity between FR and SR (the connectivity project). This Discussion Paper is expected to be published in H2 2024. Additionally, some illustrative examples will also be presented by EFRAG at the April 2024 IFASS meeting (i.e., as a form of interim deliverable).
- 3 Examples that illustrate connectivity have multiple benefits including:
  - (a) They can support reporting practices by enabling companies to benchmark themselves and improve their reporting practices.
  - (b) They will help to convey, clarify, and enhance the articulation of the principles of connectivity.
  - (c) They may point to gaps or grey areas within existing requirements.
  - (d) They will educate stakeholders through practical illustration of applications and this could lessen the expectation gaps on what information can be connected.
- 4 An initial approach for the development of examples including five examples (four mock-up examples and one real-world example) to showcase this approach was presented at the aforementioned meetings (see October 2023 meeting [Agenda paper](#) - *Identifying and developing examples related to different aspects of connectivity*). Consequently, two EFRAG

subgroups to respectively focus on the development of principles and examples were formed. **As agreed at the October 2023 meeting, the development of examples and enhancement of principles will be an iterative process.**

- 5 Following the work done by the Principles subgroup (reflected in agenda paper 02-04), the Examples subgroup held its first meeting to kickstart the development of examples. The Examples subgroup is expected to work with the EFRAG Secretariat in developing examples that will be further discussed by EFRAG CAP and the EFRAG FR and SR pillar governance bodies before their inclusion in the Discussion Paper and any other external presentation.
- 6 The development of examples will be informed by the **initial set of connectivity principles agreed by the Principles subgroup as well as by the prioritised topics for illustrations that were previously agreed at the October 2023 meetings with EFRAG CAP and the two TEGs (see paragraphs 23 to 34).**
- 7 The remainder of the paper is structured as follows:
  - (a) Considerations for the development and presentation of examples/illustrations of connectivity (i.e., number, type, connectivity types and principles being illustrated, analysis/documentation of each example, and presentation) (paragraphs 8 to 19);
  - (b) Prioritised topics for illustration of connectivity (paragraphs 20 to 27);
  - (c) Summary of EFRAG CAP feedback on examples development roadmap (paragraphs 28 to 29);
  - (d) Organisation of examples development workflow (paragraphs 30 to 34);
  - (e) Questions to EFRAG FR and SR TEG for discussion (paragraphs 35 to 38);
  - (f) Appendix 1: Seven (yet to be vetted) illustrative company examples and excerpts of related hypothetical examples from the EFRAG ESRS Materiality Assessment Implementation Guidance;
  - (g) Appendix 2: Breakdown of the targeted number of examples based on priorities; and
  - (h) Appendix 3: Related thematic reviews of reporting practices (13 publications) & 50+ mostly EEA companies that are referred to across different reports.

### **Considerations for the development and presentation of examples**

#### *Target number and type of examples*

- 8 After considering the priority topics and benchmarking several thematic studies (see **Appendix 2**), it is proposed that the **EFRAG Discussion Paper includes 30+ examples (a mix**

of real-world and mock-up examples) and approximately 10 examples for the planned IFASS presentation (see Appendix 1 for the breakdown).

- 9 Note that ten examples/illustrations for the interim deliverable and 30 for the final deliverable are targeted milestones. However, as we progress with the analysis of the examples/illustrations, the number of examples may be reassessed.
- 10 To develop the connectivity examples, EFRAG CAP members, in its 2 February meeting, agreed to use both information relating to the financial year 2022 and 2023. Information would initially be gathered based on the financial year 2022 and may be updated for 2023 information.
- 11 Although reports prepared under ESRS requirements are not yet available (and will only be available in 2025), a significant portion of these requirements were inspired by existing voluntary guidance (including GRI Standards and the TCFD framework) that is applied in the currently available annual reports. For instance, as shown in the below excerpt, the Norsk Hydro Annual Report has a separate sustainability statement (covering several topics reported under GRI Standards).

Figure 1: Excerpt from Norsk Hydro Annual Report

### Notes to the sustainability statements

Environmental information		Social and governance information	
<b>Note E1 – Greenhouse gas emissions</b>	<b>213</b>	<b>Note S1 – Employees</b>	<b>225</b>
E1.1 Total greenhouse gas emissions in consolidated activities	213	S1.1 Permanent employees and payroll by region, gender and age	225
E1.2 Total greenhouse gas emissions based on ownership equity	214	S1.2 Employees by employment type and part-time employees	226
E1.3 Indirect (Scope 3) GHG emissions	214	S1.3 New employees and turnover	227
E1.4 Direct GHG emissions per GHG type in consolidated activities	215	S1.4 Total employees by Business Area	228
E1.5 GHG intensity	215	S1.5 Sick- and parental leave	228
<b>Note E2 – Other emission related indicators</b>	<b>215</b>	S1.6 Training and development	229
E2.1 Non-GHG emissions	216	<b>Note S2 – Remuneration</b>	<b>229</b>
E2.2 Spillages and leakages	216	S2.1 Gender related salary differences	229
E2.3 Permit breaches	216	S2.2 Annual total compensation ratio	230
<b>Note E3 – Energy</b>	<b>217</b>	S2.3 Standard entry level wage	230
E3.1 Energy consumption and energy production	217	<b>Note S3 – Employee engagement</b>	<b>230</b>
E3.2 Energy intensity	217	<b>Note S4 – Diversity in management</b>	<b>231</b>
<b>Note E4 – Other resource use</b>	<b>218</b>	S4.1 Women and non-Norwegians in management	231
E4.1 Materials	218	S4.2 Local representation in senior management	231
E4.2 Water 218		S4.3 Diversity and inclusion report for Norwegian subsidiaries	232
E4.3 Aluminium recycling	219	<b>Note S5 – Health and Safety</b>	<b>233</b>
<b>Note E5 – Waste</b>	<b>220</b>	S5.1 Total recordable injuries (TRI), Lost time injury (LTI) and sick leave	233
E5.1 Tailings and bauxite residue	220	S5.2 High risk incidents (HRI)	234
E5.2 Waste generated, by composition	221	S5.3 Occupational illness rate	234
E5.3 Waste treatment	221	S5.4 Wellness	234
<b>Note E6 – Biodiversity</b>	<b>222</b>	<b>Note S6 – Labor rights</b>	<b>235</b>
E6.1 Overburden moved	222	<b>Note S7 – Current income tax</b>	<b>235</b>
E6.2 Land use and rehabilitation	222	<b>Note S8 – Financial assistance from governments</b>	<b>236</b>
E6.3 Threatened species	223	S8.1 Research & Development (R&D), consolidated activities	236
<b>Note E7 – Production volumes</b>	<b>224</b>	<b>Note S9 – Social responsibility</b>	<b>236</b>
<b>Note E8 – Environmental data for 50/50-owned companies</b>	<b>224</b>	S9.1 Community investments, charitable donations and sponsorships	236
		S9.2 Social responsibility target	237

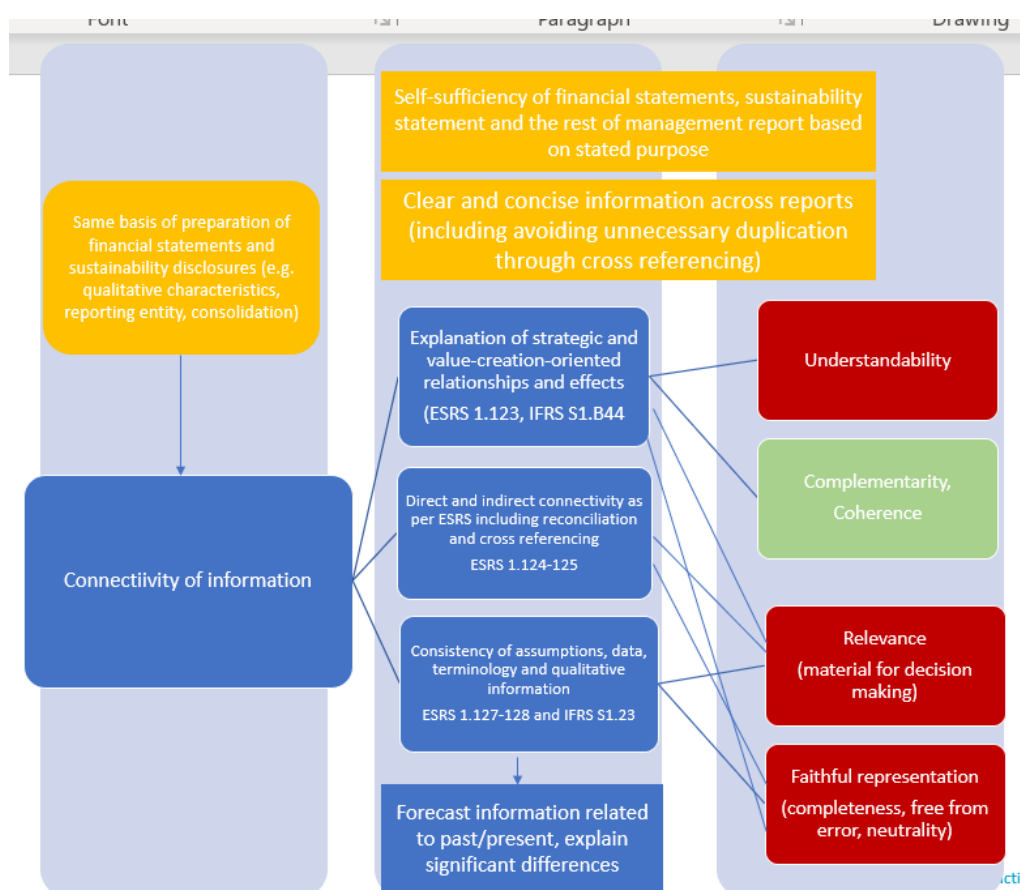
- 12 It is suggested that the **real-world examples be selected from predominantly EEA companies across diverse and highly-impacted sectors**. As noted, the EFRAG Secretariat has identified 50+ mostly EEA companies that have been used to illustrate reporting across a range of thematic reviews (see Appendix 1). In addition, EFRAG CAP members are

requested to provide examples (both real-world and mock-up examples). Examples from non-European companies could be included (as IFRS Sustainability requirements are in the scope of the connectivity project) but it is expected that the bulk of examples in the Discussion Paper will be EEA companies.

*Connectivity principles and types of connectivity being illustrated*

13 Figure 2 below visually depicts the types of connectivity and principles of connectivity (as agreed by the EFRAG CAP Principles subgroup) that will guide the choice of illustrations/examples of connectivity. As noted earlier, **these principles are tentative and high-level, and they will be updated based on the learnings during the development of examples.**

Figure 1: Principles of Connectivity of information that will be applied for illustrations/examples (Colour code- Blue-Types of connectivity identified in ESRS and IFRS Sustainability requirements; Orange- Overarching principles that contribute to connectivity of information; Green- Principles that specifically enhance connectivity of information, Outcomes of applying connectivity principles)



14 Based on the above initial principles agreed by the Principles subgroup, the attributes/principles for assessing the quality of the illustration of connections will include both overarching and connectivity-specific principles:

*Examples development and presentation methodology - Issues Paper*

- (a) Relevance (reflecting material information) including through the complementarity and coherence of the information in the financial statements, sustainability statements/ disclosures and the rest of the management report. The extent to which the overarching objective of the observed reporting is to provide “a holistic view between all the factors that affect value creation”.
  - (b) Self-sufficiency of each report based on the stated objective of the different reports. As a result, some material information may be repeated but it should be tailored to convey incremental information.
  - (c) Avoidance of unnecessary duplication.
- 15 Other required qualities that are expected to be illustrated in the chosen examples will include faithful representation (complete and neutral information via avoiding greenwashing) and understandability (e.g., as noted in the January Examples subgroup discussion, excessive cross-referencing can lessen the understandability of information).

*Expected analysis and documentation for each example*

- 16 To justify the choice of and share the learnings gleaned from each example/illustration, it is proposed the following should be analysed and documented per example. The following reflects **baseline information** which will be required for each example:
- (a) *Which sections of the annual report/ report types are being connected (i.e., financial statements, sustainability statements/disclosures, the rest of the management report)?*
  - (b) *What topic is addressed?*
  - (c) *What is the type of connectivity the example is illustrating (i.e., direct, indirect, consistency, explanation of value-creation relationships)? What is/are the principle/s of connectivity being conveyed (e.g., complementarity, coherence)? Are there any conflicts between the connectivity principles (e.g., cross referencing versus understandability)?*
  - (d) *What are the related ESRS/IFRS S1, S2 and IFRS Accounting requirements?*
  - (e) *What information or subset of information cannot be connected and why?*
- 17 The following documentation, relating to **users and other stakeholders considerations**, is more judgemental and the information to be provided will depend on the examples.
- (a) Users’ analytical considerations

- (i) Why is the particular illustration of connectivity useful for investors and other users of financial statements and sustainability statements/disclosures? What analytical questions faced by investors and other users of financial statements/sustainability reports are being addressed by the disclosure/application of the illustrated connectivity principle?
  - (ii) For the mock-up examples, for instance, those that may be related to anticipated financial effects, what connectivity “techniques” would be most useful for investors and other users of financial statements and sustainability reporting?
  - (iii) What is the most suitable location for the illustrated disclosure (i.e. financial statements, sustainability statement, the rest of the management report)?
- (b) Other stakeholder considerations
- (i) What constraints may entities/preparers face in applying this connectivity principle/disclosing the illustrated disclosure?
  - (ii) What if/any would be the enforcement and assurance considerations related to the disclosure (e.g., when cross-referencing occurs, if a sustainability disclosure under IFRS Sustainability requirements or TCFD framework is included in the notes to the accounts)?
  - (iii) What is the most suitable location for the illustrated disclosure (i.e. financial statements, sustainability statement, the rest of the management report)?

*Overall documentation/analysis*

- 18 Any recommendations for improvement or any additional relevant information to be suggested should be an overall conclusion looking at all the examples together rather than analysing this aspect for each example.

*Presentation of illustrations/examples*

- 19 The approach used by the EFRAG European Lab project task force on the linkage in the reporting of the business model, risks and opportunities (PTF-RNFRO) to link principles to examples in its 2021 report could be similarly applied. (The principles described in [Towards Sustainable Business: Good Practices in Business Model, Sustainability Risks and Opportunities Reporting in the EU](#) and Examples in the Supplementary Document: [Good Reporting Practices](#)). We will also consider whether to apply the same presentation as the EFRAG European Lab projects on climate-related reporting and PTF-RNFRO.

### Prioritised topics for Illustrations of connections

- 20 The topics for which illustrations of connectivity are prioritised in the connectivity project are derived from past discussions with the EFRAG FR and SR TEGs and the EFRAG CAP and the recommendations made in several thematic reviews (e.g. Norwegian Finanstilsynet report). These prioritised illustrations were also validated by the EFRAG CAP principles subgroup.
- 21 The illustrations of connections will include both:
- (a) Illustrations of connections from sustainability statements/disclosures to financial statements and/or the rest of the management report; and
  - (b) Illustrations of connections from financial statements to information outside the financial statements.
- 22 Examples/illustrations of what information cannot be connected will also be included. Appendix 1 has hypothetical situations drawn from the EFRAG ESRS Materiality Assessment Implementation Guidance showing why financial statements and sustainability statements information may not be connected.

*Illustrating connections from sustainability reporting to financial statements and the rest of the management report that will be prioritised*

- 23 The sustainability reporting topics that are covered in the EFRAG research project are **climate and other environmental topics, workforce, and business conduct**.
- 24 While illustrating the connectivity from sustainability information to financial statements' information, the priority will be on illustrations of:
- (a) Explanations of strategic and value-creation oriented relationships; and
  - (b) Consistency of significant assumptions, data, and qualitative information including a focus on relation forecasts to information on the past/present and use of the same (or different) assumptions.
- 25 Illustrations of direct connectivity and to a lesser extent indirect connectivity may be deemed to be a lesser priority as these aspects are considered relatively straightforward as they could be deemed to be establishing "mechanical" connections (i.e. merely linking data points across different reports without necessarily providing incremental information on the entity's financial performance, financial position, and value creation relationships). However, illustrations of these types of connectivity could be included when related to the prioritised topics (e.g. taxonomy-aligned investments) and also when a point related to the decision-usefulness of information for users can be raised based on the

context/accompanying narrative information. They could be included if there are analytical considerations for users. For instance, for the GHG intensity and Energy intensity metrics based on revenue, an entity's consolidation of the numerator (GHG emissions or Energy consumption) may include amounts related to associates and joint ventures. For this situation, there may be questions on whether analytical adjustments/APMs may be expected to be provided by preparers.

26 Illustrations of connections from sustainability reporting information to financial statements and the rest of the management report will include the following topics:

- (a) Illustrations of connections between the business model, strategy, risks and opportunities in sustainability disclosures and information in the financial statements. This could be a note in the financial statements or a disclosure in the management report.
- (b) illustrations of Article 8 taxonomy investments to financial statements information. This disclosure would be expected in the sustainability report. [Examples from BASG and Equinor are included below.](#)
- (c) illustrations of how anticipated financial effects can be connected to financial statements' information.

These include information that may be financially material within sustainability disclosures but do not meet the definition of assets and liabilities within financial statements. Reference will be made to the anticipated financial effects identified in the topical Standards including but not limited to ESRS E1 *Climate Change* requirements. Other sustainability matters with future financial effects<sup>1</sup> may include:

- (i) Adverse nature/environmental impacts caused by the company's products (e.g., impacts of microplastic in groundwater, seawater; oil spills) without the company having restoration obligations.
- (ii) Potential environmental liabilities and health & safety-related liabilities arising due to potential health problems caused by the company's products (e.g., alcohol, tobacco, medicine, hormonal damages).
- (iii) Potential assets (i.e., Value of potential reuse of materials (circular economy) and sustainability-related research and development activities that are not recognised as intangible assets. For instance, the UKEB September 2023

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<sup>1</sup> Drawn from the 2021 Project Task Force for Non-Financial Reporting Standards (PTF-NFRS) report



connectivity report had an example from the pharmaceutical industry (i.e., where the development of new inhalers with a low global warming potential due to upcoming regulation was conveyed in the sustainability disclosure but there was no disclosure of capitalised assets in the financial statements).

- (d) Illustrations of human rights and employee benefits disclosed in sustainability disclosures. There will be a need to consider how these disclosures could be linked to financial statements' information.
- (e) illustrations of other information (besides anticipated effects) that may be financially material in sustainability reporting but not in the financial statements. Inspiration will be drawn from the ESRS Materiality Assessment Implementation Guidance.

*Illustrating connections starting from financial statements to information outside financial statements that will be prioritised*

27 Financial statement information to be connected to sustainability statements /disclosures will include overarching illustrations of disclosures of how significant judgments, major sources of estimation uncertainty associated with sustainability risks and opportunities affect the carrying values of financial statement line items. The following topics are expected to be the prioritised illustrations:

- (a) The valuation of tangible and intangible non-financial assets, i.e., impairment, amortisation, residual lives, and residual value and how that is linked to information in the sustainability-related disclosures (e.g. R&D investments in new products, stranded assets).
- (b) contingent liabilities, provisions and disclosure of information related to net-zero commitments, environmental liabilities, and workforce-related liabilities. This may overlap with the anticipated financial effects discussed in the preceding paragraph.
- (c) disclosures based on a qualitative materiality assessment. Of note, in its project on climate-related and other uncertainties in the financial statements, the IASB is exploring developing examples of qualitative materiality assessment related to climate-related and other uncertainties in the financial statements (see EFRAG agenda paper<sup>2</sup> for November 2023 TEG-CFSS meeting). Hence, practical examples in

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[https://efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FMeeting%20Documents%2F2301301054051928%2F05-01%20-%20COUFS\\_EFRAG%20FR%20TEG-CFSS%202023-11-29.pdf](https://efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FMeeting%20Documents%2F2301301054051928%2F05-01%20-%20COUFS_EFRAG%20FR%20TEG-CFSS%202023-11-29.pdf)

the EFRAG research project can complement the work of the IASB and other similar initiatives (e.g. examples developed by ESMA).

- (d) segment and disaggregation of revenue disclosure as a way of showing if/how changes in the business model aligned with the green deal objectives affect the information disclosed in the segment and revenue disclosures.
- (e) other matters that are highlighted in the 2023 ESMA enforcement priorities. For instance, ESMA expects issuers to explain how climate matters have been considered in the measurement of investment properties (e.g. transition and physical risks)

### **EFRAG CAP feedback on the approach to developing examples**

28 The following comments were made:

- (a) *Number of examples* – EFRAG CAP members agreed with the targeted number of examples and to reassess this further along as it may be difficult to find all the examples. In addition, they considered that it is necessary that the initial population of examples be significantly bigger than the targeted examples per topic.
- (b) *Sectors and country* – EFRAG CAP members agreed that the different sectors, e.g., financial institutions, and also country should be considered.
- (c) No single example can illustrate all aspects of connectivity.
- (d) Highlight good practice examples – EFRAG CAP members agreed that it was important to analyse and develop connectivity examples from the perspective of what was seen as good practice without giving the perspective that the whole report of an entity is a good practice. The objective was to pinpoint the positive aspects of the analysed examples and not to look at the negative ones. It was also considered important to explain why there was no connectivity in areas where expected.
- (e) *Mock-up examples* - Some EFRAG CAP members considered that it would not be easy to provide mock-up examples nor could it be determined, at this stage, how many mock-up examples are needed. In addition, there was a concern expressed that mock-up examples would be seen as a recommendation for entities to disclose information in a certain way. In response to this concern, it was noted by the EFRAG Secretariat that there will be a need for caveats making clear the purpose and non-authoritative nature of the examples.
- (f) Other EFRAG CAP members expressed the view that mock-up examples were necessary because there was no actual reported data under ESRS standards yet. There was agreement that mock-up examples could address additive aspects of ESRS

and IFRS Sustainability requirements (e.g., anticipated financial effects) Some EFRAG CAP members made the following suggestions:

- (i) It would be useful to compare what was currently reported by companies in the market and what would be ideal to be reported;
  - (ii) when developing mock-up examples start initially from real-life examples and develop mock-up ones based on the same assumptions for different topics.
- (g) *Which financial year to consider* – It was agreed to use both information relating to the financial years 2022 and 2023. Information would initially be gathered based on the financial year 2022 and may be updated for 2023 information.

*Hypothetical examples included in the ESRS materiality assessment implementation guidance (MAIG)*

29 If mock-up examples were to be developed based on the ESRS materiality implementation guidance, one needs to be clear in explaining the connectivity of lack of connectivity to the financial statements. In addition, one needs to carefully analyse which disclosures to consider as there may be some legal issues in providing some disclosures.

**Suggested organisation of examples/illustrations development workflow**

30 As suggested above, there is a possible target of 30+ examples for the EFRAG Discussion Paper that will be published in H2 2024 and 10 examples for the EFRAG Presentation to IFASS in April 2024 (i.e., that should be agreed upon by EFRAG CAP, EFRAG TEGs by end of March 2024). These examples will be developed by the Examples subgroup working with the EFRAG Secretariat and with the input of the full CAP.

31 So far, the EFRAG Secretariat has gathered the five (yet to be vetted) examples shown in Appendix 1. Going forward, using the AI-based application Alpha Sense, we will be screening the sustainability disclosures, management report, and financial statements of the 50+ mostly EEA companies identified from thematic reviews in different publications (see Appendix 3). The screening will look for any disclosures around the priority topics identified in paragraphs 22 and 23 above. Any suitable examples will be presented to the CAP- Examples subgroup for further vetting before presentation to the full CAP.

32 We are also requesting EFRAG CAP members to forward any suitable examples reflecting the prioritised topics. Whilst suggesting examples to the EFRAG Secretariat and Cedric Tonnerre, the Examples subgroup leader, EFRAG CAP members should as far as possible include information reflected in paragraph 16 above, i.e., justifying your choice of each example/illustration.

- 33 The EFRAG Secretariat has organised a survey for EFRAG CAP members to indicate which of the mentioned priority topics they would like to be involved in whilst developing examples. We propose to limit the screening per topic to 3 EFRAG CAP members. As shown in Appendix 2 and Paragraphs 26 and 27 - there are ten topics to focus on for developing connections.
- 34 EFRAG CAP members will work in small groups of three on different topics. A project plan and timings of the various meetings have been shared with EFRAG CAP. The illustrations/examples will be consequently considered by EFRAG FR and SR Pillar governance bodies before being included in the Discussion Paper and EFRAG's presentation to IFASS in April 2024.

**Questions for EFRAG FR-SR TEG members**

- 35 Do EFRAG FR-SR TEG members agree with the suggested considerations for the development and presentation of examples summarised in paragraphs 13 to 19?
- 36 Specifically, on the above question, do you agree with including 30+ examples for the Discussion Paper and approximately 10 examples for the April 2024 IFASS Paper/Presentation? Do you agree with the suggested characteristics of the examples (i.e., predominantly EEA companies)? Please explain.
- 37 Paragraph 16 above suggests information to be documented to justify the choice of an example/illustration. What other aspects, if any, do you consider need to be added?
- 38 Do you have any other comments?

## APPENDIX 1: ILLUSTRATIVE EXAMPLES

- Appendix 1 has five examples (yet to be vetted by the CAP Examples subgroup that the EFRAG Secretariat has gathered. It also has hypothetical examples from the EFRAG ESRS Materiality Assessment Implementation Guidance on why information in the financial statements and sustainability statements cannot be connected.

*Illustrative Example 1: R&D on sustainability strategy: Norsk Hydro sustainability statement. Cross-referencing of the sustainability statement to financial statements is done. This can be seen as an example of direct connectivity. The analysis of this example would need to evaluate why the cross-referencing of this amount is decision useful to the readers of the report.*

### NORSK HYDRO SUSTAINABILITY STATEMENT

#### Note S8 – Financial assistance from governments

##### Reporting principles

R&D expenses are collected through Hydro's financial reporting, see Hydro's financial statements [note 10.2 Research and Development](#) to the consolidated financial statement. R&D funding is gathered from Hydro's corporate technology office and our main R&D centers, located in Årdal (smelter technology) and Sunndal (alloys and casting) in Norway and Brazil (Bauxite & Alumina). The R&D centers in Hydro Extrusions are in Finsspång, Sweden, and Detroit, USA. Funding received are actual income received from public research funds, e.g. The Research Council of Norway (Forskningsrådet) and Enova, through the year. See our section on [collaborating with other parties](#) for more information.

#### S8.1 Research & Development (R&D), consolidated activities

GRI reference: GRI Standards 201-4 (2016)

##### Research & Development

NOK million	2022	2021	2020	2019	2018
Research & Development expenses	655	512	633	625	594
Funding received <sup>1)</sup>	29	28	34	36	35

<sup>1)</sup> In addition comes funding to the Karmøy Technology Pilot of NOK 1.8 billion from 2015-2018. Hydro participates in collaborative projects carried out by other research organizations which receive public funding directly. Such funding is not included in the figures above.

See section on [collaborating with other parties](#) for more information and the financial [note 5.2](#) and [note 10.2](#).

### NORSK HYDRO FINANCIAL STATEMENTS

## Examples development and presentation methodology - Issues Paper

See [note 2.2 Intangible assets](#) for further details.

### Research and development in 2022 and 2021

Hydro carries out its main research and development activities through research centres in the business areas. Total expensed research and development cost was NOK 655 million in 2022 and NOK 512 million in 2021. The greater part of the expensed research and development costs relates to in-house research and application development organizations, while the remainder represents work carried out by external institutions. Government grants have been received on basis of some of the projects, recognized as other income, i.e. have not deducted in the amounts mentioned above.

Hydro undertakes research and development activities to deliver on its strategic direction, including meeting its sustainability ambitions. Hydro is committed to achieving net-zero emissions in terms of Scope 1 and 2 by 2050 or earlier and expects to have initiatives in place for cutting own carbon emissions by 30 percent by 2030. To deliver on this commitment, new technologies enabling the delivery of net zero products and net zero operations are needed, to which research and development activities have been initiated. The activities are carried out throughout the value chain of Hydro.

#### Alumina

Bauxite residue is a leftover material from the process of refining bauxite into alumina at the Alunorte refinery. Hydro and Senai Institute of Innovation in Mineral technologies (ISI-TM) initiated a partnership in 2019 to develop methods and processes for the reuse of bauxite residues, including industrial application and extraction of other minerals from the residues, and opportunities for applying the residue as a soil conditioner in local agriculture.

Development projects also include development of methods for replacing coal fired boilers with electrical boilers at the alumina refinery Alunorte with the aim of reducing greenhouse gas emissions.

#### Primary aluminium production

Aluminium production is an industry with hard-to-abate emissions, requiring development and maturation of technologies to reduce emissions. Hydro is pursuing technology pathways toward near zero aluminium. To secure the value of existing primary aluminium plants, Hydro is developing carbon capture and storage (CCS) solutions that can be retrofitted into the existing plants. Hydro is planning to test and pilot the most promising CCS technology, up to industrial scale pilot by 2030.

Another pathway more suited for greenfield aluminium plants is Hydro's proprietary HalZero technology. This technology converts alumina to aluminium chloride prior to electrolysis in a process where chlorine and carbon are kept in closed loops, resulting in a fully decarbonized process. Hydro has been working on lab-scale development of this technology for five years and has now developed a roadmap to bring this to an industrial scale pilot before 2030.

#### Aluminium recycling

Zero-carbon aluminium can also be achieved by recycling more post-consumer scrap. Using only post-consumer scrap, Hydro will be able to produce a near-zero carbon product at a competitive cost. Hydro has patented aluminium sorting technology, and regularly seek to improve and further develop technology and processes, including sorting technology for post-consumer scrap.

Hydro is also preparing to test casthouse decarbonization technology for the recycling and primary plants to reach net-zero. Hydrogen based processes is developed and planned to be tested at pilot scale for furnaces.

## Illustrative Example 2: Equinor - Reconciliation of taxonomy Capex amount in sustainability disclosure to additions on non-financial assets in financial statements (Indirect connectivity)

### Appendix 1

#### Mandatory KPIs

#### KPI denominators

##### Turnover

Total turnover consists of the reported revenue for contracts with customers included in the revenue line item and presented in [note 5 Segments](#) in the consolidated financial statements. The revenue included in the numerator and denominator in 2021 consisted of revenue included in the consolidated financial statement. Equinor has reassessed the definition in accordance with updates guidelines. Net income/(loss) from equity accounted investments and other income (i.e. gain on divestment of assets) are excluded from the definition of the mandatory KPI, and not part of the revenue denominator. For Equinor the KPI denominator related to turnover will be highly impacted by changes in commodity prices.

The 2021 turnover KPIs been updated to include revenue for contracts with customers as described above. The total updated 2021 turnover KPI is 0% which is the same as reported in 2021.

##### Capex

Total capital expenditures consist of additions to property, plant and equipment including right of use assets line item as specified in [note 12 Property, plant and equipment](#) and additions to intangible assets as specified in [note 13 Intangible assets](#) to the Consolidated financial statements. Additions excludes additions and subsequent changes in estimated asset retirement obligations based on policy interpretation of the delegated act. This is an interpretation which has been aligned with industry practice and has been

(in USD million)	Note	2022
Additions to PP&E, intangibles and equity accounted investments	5	9,994
Less:		
Additions to Equity accounted investments	15	(337)
Goodwill Additions	13	(36)
Capex denominators defined by the EU Taxonomy		9,621

updated from our prior year definition. Capitalised exploration and acquisition costs of oil and gas prospects related to exploration are recognised as intangible assets, and by interpretation of the Taxonomy regulation, considered to be included the KPI denominator, as this is a part of Equinor's ongoing activity (see assessment below). Goodwill acquired through business combinations is excluded from the capital expenditure KPI.

The 2021 capex KPIs been updated to include capex related to the Hywind/Tampen project in the denominator and excluding ARO additions in the denominator. The total updated 2021 capex KPI is 2% which is the same as reported in 2021.

##### Opex

Total operating expenditures under the Taxonomy cover direct non-capitalised costs that relate to research and development, building renovation measures, short-term lease, maintenance and repair, and any other direct expenditures relating to the

day-to-day servicing of assets of property, plant and equipment that are necessary to ensure the continued and effective functioning of such assets.

The operating expenditures included in the numerator and denominator in 2021 were considered to be represented by the reported amounts included in the operating expenses and selling general and administration expense line items in the Consolidated financial statements. Equinor has reassessed the opex definition in accordance with updates from the regulators and industry practice. Per the above description the 'other direct expenditures relating to the day-to-day servicing of assets of property' has been narrowed in scope to only include direct maintenance related expenses. This results in the operating expenditures in 2022 consisting of a subset of the operating expenditures in the income statement and does not include any selling, general and administrative expenditures, depreciation, amortisation, impairment and exploration expenses.

The opex denominator and numerator have been updated in accordance with the narrow definition as described below. There were no opex related to the eligible activities in 2021, hence the updated opex KPI for 2021 has been changed from 2% to 0%.

#### Application of the KPIs

The definition of the capex KPI includes intangible assets in accordance with IAS 38. Acquired goodwill and capitalised costs according to the successful efforts method under IFRS 6 is out of the scope of IAS 38. The rationale for excluding IFRS 6 from the capex KPI is not clearly stated in the Taxonomy regulation. Equinor regards exploration activities as part of the ongoing core activities and has included capitalised exploration costs in the capex denominator. The exploration costs are not covered by the EU Taxonomy opex definition and not included in the opex KPI. Capitalised exploration expenditures do not have significant effect on the reported capex KPIs for the year-end 2022.

The denominators are calculated based on reported IFRS numbers in the Consolidated financial statements. For Equinor this has the effect that the proceeds from the sale of the Norwegian State's (SDFI) oil production on the NCS, that Equinor markets and sells on their behalf (see [note 27 Related Parties](#) to the Consolidated financial statements), that is reported on gross basis and recognised as revenue in the income statement, will have a negative impact on the reported KPI related to taxonomy-eligible and aligned revenue. Total purchases of oil and natural gas liquids from the Norwegian state amounted to USD 13 billion in 2022 and USD 10 billion in 2021.

## Illustrative Example 3: BASF – taxonomy investments in sustainability reporting linked to financial statements (direct connectivity) (link between art. 8 Taxonomy and Consolidated Financial Statement). The turnover and capex in the management report can be reconciled to the financial statements.

BASF management report p. 97:

E.U. taxonomy indicators: 2022 turnover			
			Subtotal
Economic activities	Turnover	Proportion	CI of mkt
	Million €	in %	
<b>A. Taxonomy-eligible activities</b>			
<b>A.1. Environmentally sustainable activities (taxonomy-aligned)</b>			
3.05 Manufacture of energy efficiency equipment for buildings	63	0.1	
3.12 Manufacture of soda ash	6	0.0	
3.14 Manufacture of organic basic chemicals	249	0.3	
3.17 Manufacture of plastics in primary form	20	0.0	
<b>Total taxonomy-aligned activities</b>	<b>339</b>	<b>0.4</b>	
<b>A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)</b>			
3.04 Manufacture of batteries	1,423	1.6	
3.05 Manufacture of energy efficiency equipment for buildings	3	0.0	
3.10 Manufacture of hydrogen	25	0.0	
3.12 Manufacture of soda ash	6	0.0	
3.13 Manufacture of chlorine	1	0.0	
3.14 Manufacture of organic basic chemicals	2,931	3.4	
3.15 Manufacture of anhydrous ammonia	296	0.3	
3.16 Manufacture of nitric acid	217	0.2	
3.17 Manufacture of plastics in primary form	6,374	7.3	
<b>Total not taxonomy-aligned activities</b>	<b>11,277</b>	<b>12.9</b>	
<b>Sum A.1. + A.2.</b>	<b>11,616</b>	<b>13.3</b>	
<b>B. Taxonomy-non-eligible activities</b>			
Turnover from taxonomy-non-eligible activities	75,714	86.7	
<b>Total</b>	<b>87,327</b>	<b>100.0</b>	

BASF management report p. 98:

E.U. taxonomy indicators: 2022 capital expenditures			
			Subtotal
Economic activities	Capital expenditures	Proportion	of capital expenditures
	Million €	in %	
<b>A. Taxonomy-eligible activities</b>			
<b>A.1. Environmentally sustainable activities (taxonomy-aligned)</b>			
3.05 Manufacture of energy efficiency equipment for buildings	1	0.0	
3.12 Manufacture of soda ash	15	0.3	
3.14 Manufacture of organic basic chemicals	6	0.1	
3.17 Manufacture of plastics in primary form	5	0.1	
<b>Total taxonomy-aligned activities</b>	<b>27</b>	<b>0.5</b>	
<b>A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)</b>			
3.04 Manufacture of batteries	310	6.2	
3.10 Manufacture of hydrogen	30	0.6	
3.12 Manufacture of soda ash	6	0.1	
3.13 Manufacture of chlorine	0	0.0	
3.14 Manufacture of organic basic chemicals	378	7.6	
3.15 Manufacture of anhydrous ammonia	5	0.1	
3.16 Manufacture of nitric acid	3	0.1	
3.17 Manufacture of plastics in primary form	163	3.3	
<b>Total not taxonomy-aligned activities</b>	<b>895</b>	<b>18.0</b>	
<b>Sum A.1. + A.2.</b>	<b>922</b>	<b>18.6</b>	
<b>B. Taxonomy-non-eligible activities</b>			
Capital expenditures on taxonomy non-eligible activities	4,045	81.4	
<b>Total</b>	<b>4,967</b>	<b>100.0</b>	

BASF consolidated financial statements p. 203:

## Statement of Income

### BASF Group

Statement of income		2022		2021
Million €				
<b>Sales revenue</b>		7	87,327	78,598
Cost of sales		8	-66,260	-58,801
<b>Gross profit on sales</b>			21,067	19,797
Selling expenses		8	-9,613	-8,414
General administrative expenses		8	-1,520	-1,408
Research and development expenses		8	-2,298	-2,216
Other operating income		9	1,808	1,894
Other operating expenses		9	-3,283	-2,650
Income from integral companies accounted for using the equity method		10	388	675
<b>Income from operations</b>		5	6,548	7,077
Income from non-integral companies accounted for using the equity method		10	-4,885	285
Income from other shareholdings			34	47
Expenses from other shareholdings			-89	-125
<b>Net income from shareholdings</b>			-4,935	207
Interest income			196	168
Interest expenses			-629	-482
<b>Interest result</b>			-433	-314
Other financial income			182	94
Other financial expenses			-168	-215
<b>Other financial result</b>			15	-122
<b>Financial result</b>		11	-418	-436
<b>Income before income taxes</b>			1,190	7,448
Income taxes		12	-1,581	-1,430
<b>Income after taxes from continuing operations</b>			-391	6,018
<b>Income after taxes from discontinued operations</b>			-	-36
<b>Income after taxes</b>			-391	5,982
of which attributable to shareholders of BASF SE (net income)			-627	5,523
of which attributable to noncontrolling interests		13	236	459
<b>Earnings per share from continuing operations (€)</b>		6	-0.70	6.05
<b>Earnings per share from discontinued operations (€)</b>		6	-	-0.04
<b>Earnings per share (€)</b>		6	-0.70	6.01
Dilution effect (€)		6	-	-0.01
<b>Diluted earnings per share (€)</b>		6	-0.70	6.00

BASF consolidated financial statements p. 222:

Segments 2022								
Million €								
	Chemicals	Materials	Industrial Solutions	Surface Technologies	Nutrition & Care	Agricultural Solutions	Other	BASF Group
Sales	14,895	18,443	9,992	21,283	8,066	10,280	4,368	87,327
Intersegment transfers	4,860	1,742	507	198	588	40	139	8,074
Sales including transfers	19,754	20,186	10,499	21,481	8,654	10,320	4,508	95,401
Income from integral companies accounted for using the equity method	269	25	6	91	8	-	-14	386
<b>Income from operations (EBIT)</b>	1,758	1,776	1,097	612	605	1,221	-523	6,548
Assets	10,481	10,864	6,318	14,899	8,038	17,071	16,803	84,472
of which goodwill	210	196	635	2,404	883	3,299	68	7,696
of which intangible assets	64	565	142	1,024	322	3,414	45	5,577
property, plant and equipment	5,520	4,833	1,998	3,977	2,996	2,658	986	22,967
integral investments accounted for using the equity method	1,094	214	15	537	40	-	455	2,356
Liabilities	3,228	3,979	2,140	3,860	2,751	3,975	23,618	43,550
Research and development expenses	93	201	172	335	172	944	381	2,298
Additions to property, plant and equipment and intangible assets (including acquisitions)	1,701	880	322	740	642	414	268	4,967
Depreciation and amortization of property, plant and equipment and intangible assets	1,013	884	346	651	450	701	155	4,099
of which impairments	214	47	3	103	11	10	7	393
reversals of impairments	0	0	1	-	1	16	3	20

*Illustrative Example 4: BASF – where sustainability information may/may not affect recognition/measurement in financial statements*

Sustainability reporting includes information that may affect recognition/measurement in financial reports. Qualitative disclosures in the financial statements [BASF report 2022](#)

Management Report p. 45, p. 118	Notes to financial statements p. 213
Our activities to reduce greenhouse gas emissions include using renewable energies for both electricity and steam production, developing and applying new low-carbon production processes, using renewable raw materials, and ongoing	<b>Climate and sustainability-related developments:</b> The chemical industry is resource-intensive. BASF is committed to the Paris Climate Agreement: Using resources as efficiently and responsibly as possible



measures to further increase energy and resource efficiency in our production (see page 135). We have also set up a project organization to achieve our climate protection targets. The Net Zero Accelerator unit concentrates on implementing and accelerating projects on low-carbon production technologies, the circular economy and renewable energies.

In addition to this climate protection target, we have set further sustainability targets, for example, on responsible procurement, resource-efficient and safe production, engaged employees and diversity.

We want to offer our customers innovative products and solutions that support their sustainability goals. That is why we ensure that the business units continuously monitor and evaluate relevant sustainability aspects. These evaluations are taken into account in strategies, in the implementation of research projects and in innovation processes, among other things.

[...] Our aim is to continuously increase the share of renewable raw materials in our value chains. As for fossil raw materials, we also consider economic criteria, aspects of supply security, and process and product safety, as well as the potential impact on sustainability along the value chain. Alongside positive effects like reducing greenhouse gas emissions, these can also have negative effects on areas such as biodiversity, land use or working conditions, depending on the raw material. This is why we carefully weigh up the advantages and disadvantages of using renewable resources, for example with Eco-Efficiency Analyses. At the same time, we seek dialog with our stakeholders to raise awareness of conflicting goals.

We also take into consideration recognized certification standards such as the Roundtable on Sustainable Palm Oil (RSPO) in our decisions.

and the concept of a circular economy are firmly embedded in BASF's strategy and its actions. BASF pursues clearly defined goals to reduce CO<sub>2</sub> as well regarding the use of renewable and recycled raw materials. In this context, BASF always strives to employ raw materials more efficiently and improve production processes as well as to continually seek ways to use non-fossil, renewable or recycled feedstocks. Despite the current global political situation, the path to climate neutrality is resolutely being pursued. **For this reason, current developments and measures relating to climate change and sustainability do not lead to fundamentally changed expectations with regard to useful lives or recoverability of the majority of non-current assets. There is also no material need for adjustments to provisions for environmental and restoration obligations. In individual cases, however, plants may be shut down if necessary for reasons of environmental protection.**

Climate policies are also causing fundamental changes in the automotive industry, one of BASF's key customer industries. The transition to electromobility will have a long-term negative impact on the emissions catalyst business. **This development is reflected in a negative long-term growth rate for the Catalysts (excluding battery materials) cash-generating unit.**

Other BASF businesses will benefit from this transformation; for example, demand for innovative lightweight components and battery materials will grow. **Furthermore, climate policies can influence the business of oil and gas producers such as Wintershall Dea, which BASF accounts for using the equity method. Nevertheless, given the large share of gas in Winter shall Dea's production and reserves as well as the acceptance of gas as a bridge technology, it can be assumed that these**

	<u>assets are fundamentally recoverable. The price assumptions applied for the impairment test reflected current developments regarding climate neutrality as well as a possible oil and gas shortage due to lack of investment in this industry.</u>
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*Illustrative Example 5: Arcelor Mittal Consistency related to the use of the same assumptions for impairment testing of goodwill*

Below is an example of how an entity is currently disclosing information about risks related to its operations in the management report and information in its consolidated financial statements regarding its impairment test of goodwill.

Management report p. x–y	Notes to consolidated financial statements p. z
<p>II. Risks related to EFRAGCAP4 Co.'s operations</p> <p>...To achieve its <a href="#">2030 global carbon emissions intensity reduction target of 25%</a> covering the Scope 1 and 2 emissions attributable to the Company's operations measured in accordance with the Greenhouse Gas ("GHG") Protocol, EFRAGCAP4 Co. has estimated the gross capital cost required to be approximately \$10 billion, with the expectation that 35% of these capital expenditures will be deployed up to 2025 and the remainder in the second part of the decade. <a href="#">In addition, the Company's decarbonization strategy includes the objective of carbon neutrality by 2050</a>; since 2021, this has also been a <a href="#">legal obligation for its operations in the EU and Canada following the endorsement of Regulation (EU) 2021/1119 of the European Parliament and of the Council of June 30, 2021 (the "European Climate Law") and the Canadian Net-Zero Emissions Accountability Act</a>, respectively. These targets and estimates are based on numerous assumptions, including the costs of green hydrogen (meaning hydrogen produced exclusively from renewable sources) and its evolution over time, <a href="#">the construction of DRI and EAF facilities</a>, the development of carbon capture, utilization and storage ("CCUS") infrastructure and the timing of the introduction of GHG reduction requirements and supportive policies in applicable jurisdictions. The Company expects that low emissions technologies will become more competitive over time as more stringent GHG reduction requirements</p>	<p>Impairment test of goodwill</p> <p>... The recoverable amounts of the GCGUs are mainly determined based on their value in use. The value in use of each GCGU is determined by estimating future cash flows. [...] The Company considered its exposure to certain climate-related risks which could affect its estimates of future cash flow projections applied for the determination of the recoverable amount of its GCGUs and CGUs. [...] The Company is committed to the objectives of the Paris Agreement and announced its ambition to reduce carbon emissions by 35% in Europe and <a href="#">25% group-wide by 2030</a> and achieve group-wide carbon neutrality by 2050. These announced goals will require significant long-term investments which require a <a href="#">global level playing field</a>, access to abundant and affordable clean energy, facilitating necessary energy infrastructure, access to sustainable finance for low-emissions steelmaking and accelerated transition to a circular economy. In addition, the Company considered the <a href="#">legal obligation of carbon neutrality by 2050 effective within the EU and in Canada following the adoption of the Climate Law and the Net Zero Emission Accountability Act, respectively</a>. Accordingly, with respect to its flat steel operations in the EU and Canada, EFRAGCAP4 Co. concluded that future decarbonization capital expenditures, which correspond essentially to <a href="#">the construction of DRI-EAF facilities</a> [i.e. direct reduced iron-electric arc furnace], <a href="#">are necessary to maintain the</a></p>

*Examples development and presentation methodology - Issues Paper*

<p>and/or carbon prices are introduced and increased in each jurisdiction, alongside the introduction of effective policies to secure a level playing field, and the decarbonization technologies themselves become more mature and efficient. However, in the transition period (and through at least 2030), its investments in decarbonization will require support from host countries, first and foremost from the European Union and its member states, through supportive policies designed to avoid “carbon leakage” and provide compensation for the significantly higher costs, while at the same time maintaining a fair and competitive landscape. [...]</p>	<p>level of economic benefits expected to arise from the assets in their current condition and should therefore be included in the Company’s assumptions for future cash flows of the recoverable amount of the respective GCGUs and CGUs. [...]They may also not yet be subject to a legal obligation of carbon neutrality, as a result of which future decarbonization capital expenditures may not be included in their value-in-use calculations. Accordingly, the Company increased risk premiums included in their discount rates until they are able to accelerate their decarbonization strategy to meet the 2050 carbon neutrality objective and a legal obligation arises in the relevant jurisdiction. [...]</p>
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**ILLUSTRATIVE EXAMPLE 6: ENI**

ENI RISK REPORT (DISCLOSURE OF SUSTAINABILITY MATTER IN RISK REPORT)

*Environmental and legal risks disclosures in Management report ([Eni annual report](#), page 147)*

As a result of these trends, climate-related risks could have a material and adverse effect on the Group's results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends and the price of Eni's shares.

**Environmental, legal, IT and financial risks**

**) Eni is exposed to the risk of material environmental liabilities in addition to the provisions already accrued in the consolidated financial statement**

Eni has incurred in the past and may incur in the future material environmental liabilities in connection with the environmental impact of its past and present industrial activities. Eni is also exposed to claims under environmental requirements and, from time to time, such claims have been made against the Company. Furthermore, environmental regulations in Italy and elsewhere typically impose strict liability. Strict liability means that in some situations Eni could be exposed to liability for clean-up and remediation costs, environmental damage, and other damages as a result of Eni's conduct of operations that was lawful at the time it occurred or of the management of industrial hubs by prior operators or other third parties, who were subsequently taken over by Eni. In addition, plaintiffs may seek to obtain compensation for damage resulting from events of contamination and pollution or in case the Company is found liable for violations of any environmental laws or regulations. In Italy, Eni is exposed to the risk of expenses and environmental liabilities in connection with the impact of its past activities at certain industrial hubs where the Group's products were produced, processed, stored, distributed, or sold, such as chemical plants, mineral-metallurgical plants, refineries, and other facilities, which were subsequently disposed of, liquidated, closed, or shut down. At these industrial hubs, Eni has undertaken several initiatives to remediate and clean up proprietary or concession areas that were allegedly contaminated and polluted by the Group's industrial activities. State or local public administrations have sued Eni for environmental and other damages and for clean-up and remediation measures in addition to those which were performed by the Company, or which the Company has committed to performing. In some cases, Eni has been sued for alleged breach of criminal laws (for example for alleged environmental crimes such as failure to perform soil or groundwater reclamation, environmental disaster and contamination, discharge of toxic materials, amongst others). Although Eni believes that it may not be held liable for having exceeded in the past pollution thresholds that are unlawful according to current regulations, but were allowed by laws then effective, or because the Group took over operations from third parties, it cannot be excluded that Eni could potentially incur such environmental liabilities. Eni's financial statements account

for provisions relating to the costs to be incurred with respect to clean ups and remediation of contaminated areas and groundwater for which legal or constructive obligations exist and the associated costs can be reasonably estimated in a reliable manner, regardless of any previous liability attributable to other parties. In 2022, due to environmental regulation development setting more clear criteria concerning the recovery management of groundwater pollutants, and taking into account the expertise cumulated in years of environmental management, the Group was in position to reliably accrue a provision of about €1.3 billion to account for the future expected costs of completing ongoing cleanup of groundwater at a number of Italian hubs, where operations were shut down years ago. The accrued amounts of the existing environmental risk provision represent management's best estimates of the Company's existing liabilities for future remediation and clean-up of Eni's shut-down Italian sites.

Management believes that it is possible that in the future Eni may incur significant or material environmental expenses and liabilities in addition to the amounts already accrued due to: (i) the likelihood of as yet unknown contamination; (ii) the results of ongoing surveys or surveys to be carried out on the environmental status of certain Eni's industrial sites as required by the applicable regulations on contaminated sites; (iii) unfavourable developments in ongoing litigation on the environmental status of certain of the Company's sites where a number of public administrations, the Italian Ministry of the Environment or third parties are claiming compensation for environmental or other damages such as damages to people's health and loss of property value; (iv) the possibility that new litigation might arise; (v) the probability that new and stricter environmental laws might be implemented; and (vi) the circumstance that the extent and cost of environmental restoration and remediation programs are often inherently difficult to estimate leading to underestimation of the future costs of remediation and restoration, as well as unforeseen adverse developments both in the final remediation costs and with respect to the final liability allocation among the various parties involved at the sites. As a result of these risks, environmental liabilities could be substantial and could have a material adverse effect on the Group's results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni's shares.

Finally, in case of conviction of Eni's employees for environmental crimes, the Company could be held liable as per Italian Legislative Decree 231/2001 which states the responsibility of legal entities for certain violations of laws committed by their employees and could face fines and restrictive measures to perform industrial activities which could adversely and significantly affect results of operations,

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cash flows and the Company's reputation.

### b) Risks related to legal proceedings and compliance with anti-corruption legislation

Eni is the defendant in a number of civil and criminal actions and administrative proceedings. In future years Eni may incur significant losses due to: (i) uncertainty regarding the final outcome of each proceeding; (ii) the occurrence of new developments that management could not take into consideration when evaluating the likely outcome of each proceeding in order to accrue the risk provisions as of the date of the latest financial statements or to judge a negative outcome only as possible or to conclude that a contingency loss could not be estimated reliably; (iii) the emergence of new evidence and information; and (iv) underestimation of probable future losses due to circumstances that are often inherently difficult to estimate. Certain legal proceedings and investigations in which Eni or its subsidiaries or its officers and employees are defendants involve the alleged breach of anti-bribery and anti-corruption laws and regulations and other ethical misconduct. Such proceedings are described in the notes to the condensed consolidated interim financial statements, under the heading "Legal Proceedings". Ethical misconduct and noncompliance with applicable laws and regulations, including noncompliance with anti-bribery and anti-corruption laws, by Eni, its officers and employees, its partners, agents or others that act on the Group's behalf, could expose Eni and its employees to criminal and civil penalties and could be damaging to Eni's reputation and shareholder value.

### c) Risks from acquisitions

Eni is constantly monitoring the market in search of

does not respond or is not seen to respond in an appropriate manner to either an external or internal crisis, this could adversely impact the Group's results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni's shares.

### e) Disruption to or breaches of Eni's critical IT services or digital infrastructure and security systems could adversely affect the Group's business, increase costs and damage Eni's reputation

The Group's activities depend heavily on the reliability and security of its information technology (IT) systems and digital security. The Group's IT systems, some of which are managed by third parties, are susceptible to being compromised, damaged, disrupted or shutdown due to failures during the process of upgrading or replacing software, databases or components, power or network outages, hardware failures, cyberattacks (viruses, computer intrusions), user errors or natural disasters. The cyber threat is constantly evolving. The oil and gas industry is subject to fast-evolving risks from cyber threat actors, including nation states, criminals, terrorists, hacktivists and insiders. Attacks are becoming more sophisticated with regularly renewed techniques while the digital transformation amplifies exposure to these cyber threats. The adoption of new technologies, such as the Internet of Things (IoT) or the migration to the cloud, as well as the evolution of architectures for increasingly interconnected systems, are all areas where cyber security is a very important issue. The Group and its service providers may not be able to prevent third parties from breaking into

## ENI FINANCIAL STATEMENTS- PROVISIONS AND INFORMATION IN NOTES TO ACCOUNTS

### 21 Provisions

(€ million)	Provisions for site restoration, abandonment and social projects	Environmental provisions	Provisions for litigations	Provisions for taxes other than income taxes	Loss adjustments and actuarial provisions for Eni's insurance companies	Provisions for losses on investments	Provisions for Eures (ex Oil) insurance coverage	Other	Total
Carrying amount at December 31, 2021	9,621	2,206	452	211	295	195	93	520	13,593
New or increased provisions	381	1,923	552	54	115	37	4	320	3,386
Initial recognition and changes in estimates	(80)								(80)
Accretion discount	218	(18)						(1)	199
Reversal of utilized provisions	(567)	(364)	(24)	(8)	(95)			(160)	(1,218)
Reversal of unutilized provisions	(5)	(223)	(51)	(2)				(21)	(302)
Currency translation differences	303	3	16	10		3		9	344
Changes in scope of consolidation	(553)			(66)				1	(618)
Other changes	4	(24)	2	20	12	(46)		(5)	(37)
Carrying amount at December 31, 2022	9,322	3,503	947	219	327	189	97	663	15,267

- vi) **Raffineria di Gela SpA and Eni Mediterranea Idrocarburi SpA – Alleged environmental disaster.** A criminal proceeding is pending in relation to crimes allegedly committed by the managers of the Raffineria di Gela SpA and Eni Mediterranea Idrocarburi SpA relating to environmental disaster, unauthorized waste disposal and unauthorized spill of industrial wastewater. The Gela Refinery has been prosecuted for administrative offence pursuant to Legislative Decree No. 231/01. This criminal proceeding initially regarded soil pollution allegedly caused by spills from 14 tanks of the refinery storage, which had not been provided with double bottoms, and pollution of the sea water near the coastal area adjacent to the site due to the failure of the barrier system implemented as part of the clean-up activities conducted at the site. At the closing of the preliminary investigation, the Public Prosecutor of Gela merged into this proceeding the other investigations related to the pollution that occurred at the other sites of the Gela refinery as well as hydrocarbon spills at facilities of Eni Mediterranea Idrocarburi SpA. The proceeding is still ongoing.
- viii) **Eni SpA - Health investigation related to the COVA center.** Beside the criminal proceeding for illegal trafficking of waste, the Public Prosecutor of Potenza started another investigation in relation to alleged health violations. The Public Prosecutor requested the formal opening of an investigation with respect to nine people in relation to alleged violations of the rules providing for the preparation of a Risk Assessment Document of the working conditions at the Val d'Agri Oil Center (COVA). In March 2017, following the request of the consultant of the Prosecutor, the Labor Inspectorate of Potenza issued a fine against the employers of the COVA for omitted and incomplete assessment of the chemical risks for the COVA center. In October 2017, the Prosecutor's Office changed the criminal allegations to disaster, murder and negligent personal injury, also alleging breaches of health and safety regulations. The proceeding is ongoing.

**ILLUSTRATIVE EXAMPLE 7: NORSK HYDRO**

**DISCLOSURE OF ENVIRONMENTAL AND ARO OBLIGATIONS**

**Significant judgment in accounting for contingent assets and liabilities, uncertain assets and liabilities**  
 Evaluation of uncertain liabilities and contingent liabilities and assets requires judgment and assumptions regarding the probability of realization and the timing and amount, or range of amounts, that may ultimately be incurred. Such estimates may vary from the ultimate outcome as a result of differing interpretations of laws and facts.

The main judgmental assessments falls into two categories; whether a liability exists, and the amount of a possible liability. The existence or non-existence of a liability is a legal and/or factual assessment. The measurement of a possible liability is more challenging for requirements to remediate or rectify alleged wrong-doing than for monetary claims of compensation. In relation to perceived non-compliance with laws and regulations, authorities, non-governmental organizations, or others may claim that Hydro is responsible for mitigating actions and compensation. The legal basis for such claims as well as cost calculation and other aspects can be difficult to assess.

Hydro's industrial and mining activities are subject to a wide range of environmental laws and regulations, including end-of-life remediation regulations. The extent of site and off-site contamination, the remediation methods, and requirements that relevant environmental authorities may impose, are uncertain. The long-term use of sites, with increasing awareness of effects of contamination in society, and generally lower acceptance of contamination in communities over time impacts the content of legal standards and the responsibility of companies involved in such activities. Further, changes in remediation methods and requirements and the uncertainty of cost levels for actions to be performed years and decades into the future contribute to the uncertainty in assessing and measuring such obligations. Remediation and closure activities expected to be conducted far into the future are less accurately measured than near-term planned activities. Consequently, there is significant uncertainty inherent in the estimates.

Indirect tax regimes are complex in many jurisdictions and cross-border. Basis for such taxes may differ from actual transaction prices. Tax authorities may challenge Hydro's calculation of taxes and credits from prior periods. Such processes may lead to changes to prior periods' operating or financial expenses to be recognized in the period of change.

**Provisions**

Amounts in NOK million	2022			2021		
	Short-term	Long-term	Total	Short-term	Long-term	Total
Environmental clean-up and asset retirement obligations (ARO)	716	3,880	4,596	535	3,670	4,205
Employee benefits	1,482	435	1,917	1,417	387	1,804
Indirect taxes	37	281	318	5	209	215
Rationalization and closure cost	231	48	279	167	45	212
Other	540	645	1,185	1,003	480	1,484
<b>Total provisions</b>	<b>3,005</b>	<b>5,289</b>	<b>8,294</b>	<b>3,128</b>	<b>4,772</b>	<b>7,899</b>

The following table includes a specification of changes to provisions for the year ending December 31, 2022.

Amounts in NOK million	Environmental clean-up and ARO	Employee benefits	Indirect taxes	Rationalization and closure cost	Other	Total
<b>Specification of change in provisions</b>						
December 31, 2021	4,205	1,804	215	212	1,464	7,899
Additions and effect of change in discount rate	348	1,855	63	126	623	3,015
Used during the year	(472)	(1,700)	(17)	(55)	(876)	(3,121)
Reversal of unused provisions	(65)	(134)	-	(13)	(252)	(464)
Accretion expense and effect of change in discount rate	154	5	10	-	28	197
Foreign currency translation	416	87	48	10	198	759
<b>December 31, 2022</b>	<b>4,596</b>	<b>1,917</b>	<b>318</b>	<b>279</b>	<b>1,185</b>	<b>8,294</b>

Provisions for environmental clean-up and asset retirement obligations relate to production facilities currently in operation and facilities that are closed. The obligations relate to such actions as remediation, restoration or rehabilitation of industrial or mining sites, disposal of contaminated material and related activities. Hydro has provided for demolition of buildings and installations only where there is a legal or contractual obligation, or a specific decision to demolish, which is the case for few sites. The provision represents the present value of expected outflows at the times of expected payments. There is significant uncertainty both in the timing and amount of these remediation actions, as they are linked to future business decisions as well as decisions and approval by authorities in the jurisdictions we operate. Provisions are based on the current legal framework and standards. Hydro is in the process of assessing whether the Global Industry Standard on Tailings Management (GISTM), issued by ICM<sup>1</sup>, PRI<sup>2</sup> and UNEP<sup>3</sup>, will require additional effort and costs. Currently, no significant additional obligations have been identified. The GISTM framework may not be fully reflected in the remediation standards used for estimating actions and cost. No significant changes in cost estimates have been identified.

The most significant provisions relate to the following sites and issues. For Hydro Bauxite & Alumina's mine in Brazil we have obligations to remediate the tailing areas and mining sites, including reforestation of the area and monitoring and maintenance of the site after initial remediation. For Hydro Bauxite & Alumina's alumina refinery in Brazil we have obligations to remediate bauxite residue deposits, including monitoring the contamination levels and other aspects after initial remediation. Some activities related to these obligations are currently performed as integrated processes with ongoing deposit of residues produced in the alumina production. For Hydro Aluminium Metal's closed Kurri Kurri smelter site in Australia we have obligations to remediate certain contaminated areas at the site and have now secured approval for the appropriate long-term containment of historical spent pot lining and certain other waste material. The work is progressing and is expected to be completed early 2024. Once completed, and following a management period of five years, the containment cell will transfer to state ownership. Further, Hydro has provided for various remediation obligations in Hydro Extrusions related to both closed sites, whether previously operated or not, and for some currently active sites. Hydro also has obligations for remediation of contamination on site and in areas related to historic industrial activities, mainly in Germany and Norway, reported in Other and eliminations. The more significant of these sites are the sites in Schwandorf in Germany and the Grenland area in Norway. The GISTM may impact remediation requirements for some of these sites. For many of these provisions, there are no standard remediation methods available and cost is therefore uncertain. The provision also includes remediation of spent pot lining and certain other process related waste in all active smelters, remediation of certain known landfills and removal of limited contaminated material as well as site clearance for certain leased land. Provisions also exist for certain liabilities related to Norwegian power plant concessions to be reverted to the Norwegian Government.

Provisions for employee benefits relate to expected short-term performance bonus payments and short and long-term provisions for expected bonus payments that are based on the number of years of service, primarily for our European operations. Such bonuses are expected to be paid in periods between 10 to 50 years of service, or upon termination of employment.

Indirect taxes include taxes not related to taxable income, such as value added taxes, duties and property taxes. Provision for indirect taxes is mainly related to operations in Brazil.

Rationalization and closure cost include provisions in Hydro Extrusions for costs related to plant closures and employee reductions to reduce their footprint in response to challenging market conditions. The provision also includes costs related to the closure of Hydro's joint operation Aluchemie.

Other includes insurance provisions related to insurance contracts issued by Hydro's captive insurance company, Industriforsikring AS, to external parties including associates and joint arrangements, provisions for legal and other disputes, community donations and other contributions committed, certain liabilities related to representation and warranty provisions related to sale of businesses.

Hydro has entered into several agreements with authorities at local and state levels in Pará, Brazil, requiring Hydro to improve operational security and to make additional efforts and investments related to local societies close to the plants and to the social development of communities in Barcarena. The most significant agreements were entered into in 2018 related to the alumina refinery, Alunorte. Total remaining provisions related to these obligations are about NOK 450 million as of December 31, 2022.

<sup>1</sup> International Council on Mining and Metals  
<sup>2</sup> Principles for Responsible Investment  
<sup>3</sup> UN environment programme

**Hypothetical examples illustrating why information in financial statements and sustainability statements cannot be connected**

2 The following examples from ESRS materiality assessment implementation guidance (MAIG) can be an inspiration for the EFRAG research project mock-up examples. These examples can illustrate why information cannot be connected to financial statements information at the reporting date.

FAQ 9: How to consider time horizon in the double materiality analysis?

3 page 36, "The financial effects of assets currently used that could become impaired in the long term due to environmental changes could be not material as the assets will be fully amortised by the medium-term."

*FAQ 19: Is an IFRS or local GAAP segment an appropriate level of disaggregation for the materiality assessment?*

- 4 "A multinational group that prepares consolidated accounts bases its segments for financial reporting on products and services offered worldwide.*
- 5 When performing its sustainability materiality assessment on water, the undertaking determines that the material negative impacts are correlated to the levels of water stress in the geographical areas where the factories are located. Therefore, it identifies that the disaggregation is to be performed at geographical level and conclude that the financial reporting segments are not appropriate."*



## APPENDIX 2 – TARGETED NUMBER OF EXAMPLES BASED ON PRIORITIES

Type of illustration	Comments	Type of disclosure	Target number before April IFASS meeting (i.e. ready by 30 March)	Target for Discussion Paper
<b>Connections from Sustainability to financial statements</b>				
Illustrations of connections between the business model, strategy, risks and opportunities in sustainability disclosures and information in the financial statements.	This could be a note in the financial statements or a disclosure in the management report	Company example	2	4
Illustrations of Article 8 taxonomy investments to financial statements information	This disclosure would be expected in the sustainability report	Company example	1	3
Illustrations of how anticipated financial effects can be connected to financial statements' information	Other sustainability matters with future financial effects <sup>3</sup> may include climate change potential liabilities (environmental liabilities, health liabilities) and potential assets (R&D, recycled materials)	Mock-up examples/real-world examples for those related to contingent liabilities and provisions	2	4

<sup>3</sup> Drawn from the 2021 Project Task Force for Non-Financial Reporting Standards (PTF-NFRS) report

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Type of illustration	Comments	Type of disclosure	Target number before April IFASS meeting (i.e. ready by 30 March)	Target for Discussion Paper
Illustrations of human rights and employee benefits disclosed in sustainability disclosures	How can these disclosures be linked to the financial statements?	Mock up examples	1	2
Illustrations of other information (besides anticipated effects)	These may be financially material in sustainability reporting but not in the financial statements	Mock-up examples inspired by MAIG	1	3
<b>Connections from financial statements to information outside financial statements</b>				
The valuation of tangible and intangible non-financial assets, i.e., impairment, amortisation, residual lives, and residual value	This disclosure would be completed by an explanation on the link it has with information in sustainability-related disclosures (e.g. R&D investments in new products, stranded assets)	Company examples		4
Contingent liabilities, provisions and disclosure of information related to net-zero commitments, environmental, and human rights liabilities	Can be helpful for discussion on location	Company examples or mock-up examples	1	3
Disclosures based on a qualitative materiality assessment	Can refer to the IASB project on climate-related and other uncertainties in the financial statements	Company examples	1	2
Segment and disaggregation of revenue disclosure	This can be a way of showing if/how changes in the business model aligned with the green deal objectives affect the information disclosed in the segment and revenue disclosures	Company examples	1	2

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Type of illustration	Comments	Type of disclosure	Target number before April IFASS meeting (i.e. ready by 30 March)	Target for Discussion Paper
Other matters that are highlighted in the 2023 ESMA enforcement priorities	ESMA expects issuers to explain how climate matters have been considered in the measurement of investment properties (e.g. transition and physical risks)	Company examples		3
<b>TOTAL</b>			<b>10</b>	<b>30</b>
<b>TOTAL MOCK-UP EXAMPLES</b>			<b>2</b>	<b>9</b>
<b>TOTAL COMPANY EXAMPLES</b>			<b>8</b>	<b>21</b>

### APPENDIX 3 - THEMATIC REVIEWS OF REPORTING PRACTICES

S/n	Report	Publication	Publication date	Sample	Sectors covered	Scope
1	<a href="#">Financial reporting by European companies on climate issues</a>	Mazars	Jan-24	191 examples-94 companies	Financial institutions, services, transport, industrials, energy	EU-France
2	<a href="#">The Heat is On : Disclosures of Climate-related matters in the financial statements</a>	ESMA	Oct-23	22 examples-22 companies	Chemicals, construction, energy, telecommunications, industrials	EU
3	<a href="#">Task Force on Climate-related Financial Disclosures: 2023 Status Report</a>	TCFD	Oct-23	1365 reviewed-3100 with AI tool-21 examples from 21 companies	Energy, materials, banking, insurance, transport, agriculture, technology, consumer goods	Global (324 EU companies - 616 AI)
4	<a href="#">A Study in Connectivity: Analysis of 2022 UK Company Annual Reports</a>	UKEB	Sep-23	16 examples from 9 unnamed companies	Electricity, travel and leisure, pharmaceuticals, energy, financial services, industrials, aerospace and defense	UK
5	<a href="#">CRR Thematic review of climate-related metrics and targets</a>	FRC	Jul-23	20 companies reviewed-39 examples from 16 companies	Materials and buildings, energy, banks, asset managers	UK
6	<a href="#">Information on climate-related matters in annual financial reports</a>	Finanstilsynet	Mar-23	11 companies-no examples	Energy, manufacturing, materials, consumer discretionary and real estate	Norway
7	<a href="#">Commentary: Climate-Related Risks Disclosures in the Notes to Financial Statements: Descriptive Evidence from Australia</a>	AASB	Dec-22	Top 75 ASX companies with 7 examples from 7 companies	Financials, materials, industrials, communications, consumer goods, energy, real estate and others	Australia

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8	<a href="#">Overview of the information provided in the 2021 financial statements on the effects of climate change and the commitments made by companies</a>	AMF	Nov-22	27 companies reviewed-19 examples from 18 companies (often more than one per example)	Energy, Construction and materials, automobiles and parts, banks, electronics and electrical equipment, real estate and others	France
9	<a href="#">Still flying blind: The absence of climate risk in financial reporting</a>	Carbon Tracker	Oct-22	134 companies reviewed with 54 examples from 23 companies (often more than one per example).	Energy, industrials, transportation, consumer goods & services	Global (46 EU & UK)
10	<a href="#">Task Force on Climate-related Financial Disclosures 2022 Status Report</a>	TCFD	Oct-22	1414 companies reviewed-13 examples from 13 companies	Energy, materials, banking, insurance, transport, agriculture-food-forest, technology and media, consumer goods	Global (359 EU companies)
11	<a href="#">Financial reporting of European companies on climate issues: Findings from 2021 financial statements</a>	Mazars	2022	79 companies reviewed-66 examples from 40 companies	Energy, transport, heavy industry, Food & beverages, consumer goods, pharmaceuticals and others (excludes financial sector)	EU-France
12	<a href="#">Towards sustainable businesses: Good practices in business model, risks and opportunities reporting in the EU</a>	EFRAG European Lab PTF-RNFRO	Oct-21	44 companies reviewed-30 examples from 22 companies	19 sectors overall: Financial, energy and utilities, manufacturing, food and beverages, others	EU
13	<a href="#">How to improve climate-related reporting. A summary of good practices from Europe and beyond.</a>	EFRAG European Lab PTF-CRR	Feb-20	149 companies reviewed-58 examples from 30 companies	Materials, Energy, Banks, Capital goods, Software & services, Consumer goods, Pharmaceuticals, Insurance, Food & beverage and others	EU & Switzerland

1 Below is a subset of mostly EEA Companies that feature across the above thematic reviews

Company	Sector (GICS industry classification)	Country
1. AB InBev	Consumer staples	BE
2. ABN Amro	Financials	NL
3. Acciona	Utilities – Electric utilities	ES
4. Air Liquide	Materials	FR
5. Airbus	Industrials	FR
6. Allianz	Financials	DE
7. ArcelorMittal	Materials	LU
8. BASF	Materials	DE
9. Bayer	Healthcare	DE
10. BMW	Consumer discretionary - Automobiles	DE
11. BNP Paribas	Financials	FR
12. Bouygues	Industrials	FR
13. CRH	Materials	IE
14. Danone	Consumer staples	FR
15. EDF	Utilities – Electric utilities	FR
16. EnBW	Utilities – Electric utilities	DE
17. Enel	Utilities – Electric utilities	IT

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Company	Sector (GICS industry classification)	Country
18.Engie	Utilities – Multi-utilities	FR
19.Eni	Energy	IT
20.Equinor	Energy	NO
21.Fortum	Utilities – Electric utilities	FI
22.Iberdrola	Utilities – Electric utilities	ES
23.Imerys	Materials	FR
24.Intesa Sanpaolo	Financials	IT
25.Kering	Consumer discretionary – Textiles, Apparel & Luxury goods	FR
26.L'Oréal	Consumer staples	FR
27.Legrand	Industrials	FR
28.Mercedes-Benz	Consumer discretionary - Automobiles	DE
29.Michelin	Consumer discretionary – Automobile parts	FR
30.Naturgy	Utilities – Gas utilities	ES
31.Nestle	Consumer staples	CH
32.Norsk Hydro	Materials	NO
33.Orsted	Utilities – Electric utilities	DK
34.Philips	Healthcare	NL
35.Renault	Consumer discretionary - Automobiles	FR
36.Respol	Energy	ES

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Company	Sector (GICS industry classification)	Country
37.RWE	Utilities - Independent Power and Renewable Electricity Producers	DE
38.Saint-Gobain	Industrials	FR
39.Schneider	Industrials	FR
40.Shell	Energy	NL
41.Signify	Industrials	NL
42.Société Générale	Financials	FR
43.Solvay	Materials	BE
44.Stora Enso	Materials	FI
45.Technip Energies	Energy	NL
46.TotalEnergies	Energy	FR
47.Unibail	Real estate	FR
48.Unicredit	Financials	IT
49.Unilever	Consumer staples	NL
50.Uniper	Utilities - Independent Power and Renewable Electricity Producers	DE
51.Vallourec	Energy	FR
52.Veolia	Utilities – Multi-utilities	FR
53.Vinci	Industrials	FR
54.Volkswagen	Consumer discretionary - Automobiles	DE



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<b>Company</b>	<b>Sector (GICS industry classification)</b>	<b>Country</b>
55.Volvo	Industrials	SE