

This paper has been prepared by the EFRAG Secretariat for discussion at a public meeting of EFRAG 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 SRB or EFRAG SR TEG. The paper is made available to enable the SRT members to follow the discussions in the meeting. Given that the first sector-specific working paper is Mining, Quarrying and Coal, the purpose of this paper is twofold. On the one hand, to have the first discussion on the architecture and approach on sector-specific working papers and, on the other, to discuss the technical content for Mining, Quarrying and Coal.

**Updated ED for ESRS Mining, Quarrying and Coal  
FOR SR TEG DISCUSSION**

## DISCLAIMER

The exposure draft Mining, Quarrying and Coal is set out in paragraphs X-X and the following Appendices, that have the same authority as the main body of the [draft] Standard.

- Appendix A: Defined Terms;
- Appendix B: Application Requirements;
- Appendix C: List of datapoints that emanate from EU Law; and
- Appendix D: NACE Codes Mining, Quarrying and Coal.

Each Disclosure Requirement is stated in a bold paragraph that illustrates the objective of the disclosures. This exposure draft also uses terms defined in other [draft] ESRS and shall be read in the context of its objective.

Draft] ESRS *Mining, Quarrying and Coal* is accompanied by the following illustrative non-authoritative appendix:

- Appendix E: Material Sustainability Matters in *the Mining, Quarrying and Coal* sector

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## Objective

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1. The objective of this [draft] ESRS is to specify disclosure and application requirements that are applicable to any undertaking operating in the *Mining, Quarrying and Coal* (the “Sector”) and that are additional to the sector-agnostic ESRS disclosure and application requirements . They address impacts, risks and opportunities not covered, or not sufficiently covered, by sector-agnostic Disclosure Requirements and have to be applied in conjunction with them.
2. This [draft] ESRS covers information enabling users of the sustainability statements to understand the undertaking’s material impacts, as well as its material risks and opportunities, arising with regard to a list of sustainability matters that are considered material for the Sector under this [draft] ESRS.
3. This [draft] ESRS requires therefore the undertaking to disclose:
  - (a) the actual or potential, positive or negative impacts which the undertaking assesses as material in relation to the environmental, social and governance matters that are considered material for the Sector under this [draft] ESRS;
  - (b) the nature, type and extent of the risks and opportunities related to its impacts and dependencies which the undertaking assesses as material in relation to the environmental, social and governance matters that are considered material for the Sector under this [draft] ESRS and how they manage them;
  - (c) the actions taken to prevent, mitigate or remediate those material actual or potential negative impacts, the actions taken to mitigate material risks and pursuing material opportunities, and the result of such actions; and
  - (d) the financial effects on the undertaking over the short-, medium- and long-term time horizons of those material risks and opportunities.
4. This [draft] ESRS specifies disclosure and application requirements as follows:
  - (a) sector-specific additional datapoints and application requirements related to sector-agnostic disclosure requirements are presented under Chapter 1. Sector-specific datapoints related to sector-agnostic Disclosure Requirements of the main body of this [draft] ESRS and under Chapter 1. Application Requirements related to sector-agnostic Disclosure Requirements of Appendix B to this [draft] ESRS.
  - (b) sector-specific additional Disclosure Requirements are presented under Chapter 2. Sector-specific Disclosure Requirements of the main body of this [draft] ESRS and under Chapter 2. Application Requirements to sector-specific Disclosure Requirements of Appendix B to this [draft] ESRS.

## Scope of application

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5. An undertaking is within the scope of application of this [draft] ESRS when Oil and Gas is a significant sector according to paragraph 38 (b) and/or (c) of ESRS 2 General Disclosures, using the criteria set in AR 12 of ESRS 2 to define a significant sector.
6. [draft] ESRS SEC 1 Sector classification defines the aggregation of activities (NACE codes) into sectors for the purposes of applying sector ESRS. The list of NACE codes that pertain to the *Mining, Quarrying and Coal* sector are listed in Appendix D to this [draft] ESRS, consistent with SEC 1.
7. The *Mining, Quarrying and Coal* sector is composed of Mining, Quarrying and Coal segments.
8. The Mining segment includes the extraction of metals and minerals.
9. Extraction can be achieved by different methods such as underground or surface mining, well operation, seabed mining, salars’ exploitation, geothermal mining etc.
10. This sector also includes supplementary activities aimed at preparing the crude materials for marketing, for example, crushing, grinding, cleaning, washing, drying, sorting, sintering of ores, dredging of alluvial deposits, rock crushing or the use of salt marshes.

11. Quarrying activities include quarrying, rough trimming and sawing of large building stones, breaking and crushing of ornamental and building stones, the extraction and dredging of (industrial) sand, mining of natural phosphates and natural potassium salts, peat digging and preparation of peat to improve quality or facilitate transport or storage. It also includes mining and quarrying of various minerals and materials. Finally, support services such as exploration services, draining and pumping services or test drilling are also included in this [draft] sector standard.
12. The Coal Operations sector includes the extraction of solid mineral fuels through underground or open-cast mining and includes operations (e.g., grading, cleaning, compressing and other steps necessary for transportation etc.) leading to a marketable product.
13. The Coal Operations sector includes undertakings that mine coal and other similar materials and those that manufacture coal products. Mining activity covers both underground and surface mining, and thermal and metallurgical coal. It also includes manufacturing of coke oven products.

## Presentation of sector-specific disclosures

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14. When reporting on policies, actions, metrics and targets to manage material sustainability matters according to this [draft] ESRS, the undertaking shall include the information provided for in ESRS 2, respectively in *DC-P – Policies adopted to manage material sustainability matters*, *DC-A - Actions and resources in relation to material sustainability matters*, *DC – M - Metrics in relation to material sustainability matters* and *DC-T – Tracking effectiveness of policies and actions through targets*.
15. When preparing its sustainability statements, the undertaking shall group the disclosures by cross-cutting reporting area and, where applicable, by sustainability matter<sup>1</sup> according to the provisions set out in [draft] ESRS 1 paragraph 117. Disclosures stemming from the [draft] *Oil and Gas* ESRS shall be presented alongside the disclosures required by the corresponding sector-agnostic ESRS.

## Sector-specific materiality assessment guidance

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16. This [draft] ESRS identifies a list of matters commonly applicable to the undertakings operating in the Sector. This list has the same status of the list in AR 12, Appendix B of ESRS 1 and shall be considered by the undertaking in its materiality assessment.
17. Irrespective of the outcome of its materiality assessment, the undertaking shall:
  - (a) apply the requirements in the main body and in Appendix B of this [draft] ESRS that relate to ESRS E1 Climate Change and ESRS 2 General Disclosures;
  - (b) apply the requirements in the main body and in Appendix B of this [draft] ESRS that relate to ESRS S1 Own workforce, DRs from 1 to 9, if it has 250 or more employees;
  - (c) include the datapoints that emanate from EU law listed in Appendix C of this [draft] ESRS.
18. In relation to each of its material matters, the undertaking shall apply paragraphs 33 to 39 of ESRS 1 *General requirements*.

## Sector-specific material sustainability matters

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19. This [draft] ESRS sets out Disclosure and Application Requirements related to the sustainability matters which are commonly applicable to undertakings operating in the Sector, listed in the table below. Some of them are already listed in AR 12, Appendix B of ESRS 1. Detailed descriptions of sustainability matters are included in Appendix E.

Environmental matters	Social matters	Governance matters
E1: Climate change adaption (*)	S1: Working time and work-life balance	G1: Corporate culture (*)

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<sup>1</sup> Defined in Appendix A of ESRS 1.

E1: Energy (*)	S1: Health and Safety (*)	G1: Protection of whistle-blowers (*)
E2: Pollution of Air (*)	S1: Adequate wages and secure employment (*)	G1: Animal welfare (*)
E2: Pollution of Water	S1: Freedom of association and collective bargaining (*)	G1: Political engagement and lobbying activities (*)
E2: Pollution of Soil (*)	S1: Gender equality and equal pay for work of equal value (*)	G1: Management of relationships including payment practices (*)
E2: Pollution of living organisms and food resources (*)	S1: Training and skills development (*)	G1: Corruption and bribery (*)
E2: Substances of concern (*)	S1: Measures against violence and harassment in the workplace (*)	G1: Cyber security
E2: Industrial hazards	S1: Diversity (*)	G1: Anti-competitive behaviour
E3: Water withdrawals	S1/S2: Child labour (*)	
E3: Water consumption	S1/S2: Forced labour (*)	
E3: Water use (*)	S1/S2: Adequate housing, including water and sanitation (*)	
E3: Water discharges in water bodies and in the oceans (*)	S3: Infrastructure, including adequate housing, adequate food, water and sanitation and power(electricity) (*)	
E3: Habitat degradation and intensity of pressure on marine resources (*)	S3: Impacts on land rights (*)	
E4: Direct impact drivers on biodiversity loss (*)	S3: Security-related impacts (*)	
E4: Impacts on the state of species (*)	S3: Freedom of expression and freedom of assembly (*)	
E4: Impacts on the extent and condition of ecosystems (*)	S3: Impacts on human rights and environmental defenders	
E4: Impacts and dependencies on ecosystem services (*)	S3: Particular rights of indigenous communities. Including; Free, prior and informed consent; self-determination; and cultural rights (*)	
E4: Product innovation		
E5: Resources inflows, including resource use (*)		
E5: Waste (*)		
(*) Sustainability matter covered by Disclosure Requirements in the topical sector-agnostic ESRS (see ESRS 1 Appendix B table in paragraph AR 12.)		

## Reporting boundary

20. Without changing the application of the requirements in Chapter 5. of ESRS 1 *Value chain*, the undertaking shall include in its sustainability statements information about the operational sites and assets that are under its financial and operational control.

## Navigation table

21. The following table provides a holistic overview of the disclosure and application requirements of the [draft] ESRS *Mining, Quarrying and Coal* and at which level they need to be reported.

Name of requirement	Level of disaggregation	Mining	Quarrying	Coal	Services
<b>Sector-specific datapoints related to sector agnostic Disclosure Requirements</b>					
ESRS 2 SBM 1 Market position, strategy, business model(s) and adaption	<b>NACE</b>	X	X	X	X
ESRS 2 IRO 2 Disclosure Requirements in ESRS covered by the undertaking's sustainability statements		X	X	X	X
E1 Methane focus				X	
E1-6 Gross scopes 1,2, 3 and total GHG emissions		X	X	X	
E2 Pollution prevention and control focus		X	X	X	
E2 Industrial hazards focus		X	X	X	
E2 Closure of assets focus	<b>Operational site</b>	X	X	X	
E3-1 Policies related to water and marine resources		X	X	X	
E4-2 Policies related to biodiversity and ecosystems		X	X	X	
E4-3 Actions and resources related to biodiversity and ecosystems	<b>Bio</b>	X	X	X	
E4-4 Targets related to biodiversity and ecosystems		X	X	X	
E4-5 Impact metrics related to biodiversity and ecosystems change	<b>Bio</b>	X	X	X	
S1-1 etc Policies, actions and targets related to own workforce		X	X		X
S1 Work-related hazards focus		X	X	X	X
S3 Indigenous peoples' rights focus		X	X		X
S3-1 etc Policies, actions and targets related to affected communities		X	X		
S3-2 Processes for engaging with affected communities		X	X		
G1-2 Management of relationships with suppliers		X	X	X	
<b>Sector-specific Disclosure Requirements</b>					
MIN 1-Mapping of operational sites	<b>Operational site</b>	X	X	X	
MIN 2-Proved and probable reserves		X	X	X	
MIN 3-Policy regarding CEN-Cenelec or ISO recommendations		X	X	X	X
MIN 4-E2 Tailings facilities and impoundments	<b>Operational site</b>	X	X	X	
MIN 5-E3 Water withdrawal		X	X	X	
MIN 6-E3 Water discharge		X	X	X	
MIN 7-S1 Work stoppages		X	X	X	X
MIN 8-S3 Security personnel		X	X		X
MIN 9-S3 Metrics on affected communities	<b>Operational site</b>	X	X		
MIN 10-S3 Human rights and environmental defenders		X	X		X
MIN 11-S3 Resettlement	<b>Operational site</b>	X	X		
MIN 12-S3 Workforce hired from local communities	<b>Operational site</b>	X	X		X

Name of requirement	Level of disaggregation	Mining	Quarrying	Coal	Services
MIN 13-G1 Governmental contract transparency		X	X	X	
MIN 14-G1 State aid and competition		X	X	X	
MIN 15-G1 Beneficial ownership		X	X	X	X
MIN 16-G1 Cybersecurity		X	X	X	X
MIN 17-G1 Mineral purchases from governments		X	X	X	

**Legend:**

**NACE:** NACE/production data/geographical/market share

**Bio:** Operational site when operations connected with material IROs are located in or near biodiversity areas

**Note 1:** Operational site breakdown for closure or post-closure taking place at a given site.

## 1. Sector-specific additional disclosures related to sector-agnostic Disclosure Requirements

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### ***Disclosure Requirement related to [draft] ESRS 2 SBM 1 Market position, strategy, business model(s) and value chain***

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22. In addition to disclosing according to ESRS 2 SBM 1, the undertaking shall provide a breakdown of its net revenue (both in monetary amount and as a percentage of its total revenue per NACE-code activity where it is active for the following NACE-code activities:<sup>2</sup>
- B.05 – Mining of coal and lignite
  - B.07 – Mining of metal ores
  - B.08 – Other mining and quarrying
  - B.09 – Mining support activities
  - C.19 – Manufacture of coke oven products
23. The undertaking shall provide a breakdown of its turnover by saleable production of ore resulting from mining activities, ie by production data.
24. The undertaking shall disclose the breakdown of its production into the following categories of countries, according to their compliance with the internationally acknowledged transparency standards (such as EITI quality assurance standards) as per its scale:
- Countries with a very high progress in complying;
  - Countries with a high to satisfactory progress in complying;
  - Countries with a moderate to meaningful progress in complying;
  - Countries with a fairly low to inadequate progress in complying;
  - Countries with low to no progress in complying; and
  - Other countries.
25. The EITI categories of quality assurance are used to disclose alignment with how the principles are being implemented locally. The category “other” relates to countries for which the assessment is suspended or to countries for which the compliance has yet to be assessed.

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<sup>2</sup> This disclosure requirement is consistent with the requirements included in EBA Pillar 3 ITS Template 1 [Banking book – Climate change transition risk – Credit quality of exposures by sector, emissions and residual maturity](#).

26. The undertaking shall further disclose the total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production. The undertaking shall provide an estimation of the total addressable market for products that show reduced environmental impacts at various lifecycle stages, including during material sourcing, manufacturing, and product usage (hereafter, “reduced environmental impact products”). Total addressable market is defined as potential revenue (in billions of EUR) should the undertaking capture 100 percent of the market share of the product category (e.g., the global market for reduced environmental impact building products).
27. The undertaking shall disclose whether there is a significant difference between the total addressable market and the market that the undertaking can serve through its existing or planned capabilities, sales channels, or products (i.e., the serviceable available market).

***Disclosure Requirement related to [draft] ESRS 2 IRO 2 Disclosure Requirements in ESRS covered by the undertaking’s sustainability statements***

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28. In addition to the information required by ESRS 2- IRO 2, the undertaking shall provide the conclusions of its materiality assessment specifying:
- (a) for the items assessed to be material, a brief explanation of how they relate to the specific facts and circumstances of the undertaking, including to the description of its business model, its locations and/or its products; and
  - (b) the matters in the list of matters commonly applicable in the sector (as defined by paragraph 19) that are assessed not to be material.
29. In the list of Disclosure Requirements complied with in preparing the sustainability statements, following the outcome of the materiality assessment, to be reported following paragraph 55 of ESRS 2, the undertaking shall also cover the Disclosure Requirements of this Standard.

***Disclosure Requirement related to [draft] E1 Methane focus***

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30. In addition to the information provided following ESRS E1-2, E1-3, E1-4 and E1-5, the undertaking with coal mining operations shall disclose its policies, targets and actions related to the management and abatement of methane emissions.
31. The undertaking shall disclose its actions and resources to manage and abate methane emissions. This disclosure shall include:
- (a) whether a methane monitoring programme exists to identify sources of methane and quantify their emissions and a brief description of the programme including:
    - i. the frequency of the monitoring;
    - ii. the different methane monitoring and quantification techniques applied, together with an indication of the percentage of total methane reported in paragraph 33(a) quantified by each technique, namely:
      - 1. estimation methods involving the use of pre-determined emission factors;
      - 2. decline curves;
      - 3. handheld instruments;
      - 4. Continuous Emission Monitoring Systems (CEMS);
      - 5. Remote sensing techniques or aerial surveys.
  - (b) the geographical location of significant flaring or venting emissions;
  - (c) the actions undertaken in removing venting and flaring from drainage stations and the combustion efficiency of flaring.
32. In the absence of policies, actions and targets related to the management and abatement of methane emissions, the undertaking shall explain why such policies, actions and targets are not in place (see paragraph 60 of ESRS 2 *General Disclosures*).

**Disclosure Requirement related to [draft] ESRS E1-6 Gross scopes 1, 2, 3 and total GHG emissions**

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33. In addition to the information reported according to ESRS E1-6, the undertaking with coal mining operations shall provide a breakdown:
- (a) of its total scope 1 GHG emissions into total CO<sub>2</sub> and methane emissions;
  - (b) of total scope 1 GHG emissions by type of source, namely
    - i. stationary combustion;
    - ii. mobile combustion;
    - iii. flaring;
    - iv. venting, and
    - v. fugitive.
34. When disclosing its scope 3 GHG emissions as per ESRS E1-6 paragraph 41, the undertaking shall include the following categories:
- (a) Waste generated in operations;
  - (b) Processing of sold products;
  - (c) Use of sold products; and
  - (d) Downstream transportation and distribution.
35. The undertaking in the Mining, Quarrying and Coal sector shall in addition to Disclosure Requirement ESRS E1-6 provide a breakdown of their Scope 1, 2 and 3 GHG per NACE code activity they are active in and this for the following NACE-activities<sup>3</sup>:
- (a) B.05 – Mining of coal and lignite;
  - (b) B.07 – Mining of metal ores;
  - (c) B.08 – Other mining and quarrying;
  - (d) B.09 – Mining support service activities; and
  - (e) C.19 – Manufacture of coke oven products.
36. The undertaking shall disclose the<sup>4</sup> average tonnes of CO<sub>2</sub> equivalent, and average share of high carbon technologies per:
- (a) Tonne of output;
  - (b) Gigajoule (only for undertakings with NACE code activity B.08 Other mining and quarrying and B.09 Mining support service activities);
  - (c) NACE code activity they are active in and this for the following NACE-activities:
    - i. B.05.10 – Mining of hard coal
    - ii. B.05.20 – Mining of lignite
    - iii. B.07 – Mining of metal ores
    - iv. B.08 – Other mining and quarrying
    - v. B.09 – Mining support service activities.

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<sup>3</sup> This disclosure requirement is consistent with the requirements included in EBA Pillar 3 ITS Template 1 [Banking book – Climate change transition risk – Credit quality of exposures by sector, emissions and residual maturity](#).

<sup>4</sup> This disclosure requirement is consistent with the requirements included in EBA Pillar 3 ITS Template 3 – [Banking book – Climate change transition risk – Alignment risks](#)

***Disclosure Requirement related to [draft] E2 Pollution prevention and control focus***

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37. In addition to the information provided according ESRS E2-1, E2-2, E2-3, E2-4, the undertaking shall disclose its policies, targets, actions and metrics related to pollution prevention and control in normal operations.
38. When disclosing information provided following ESRS E2-1, paragraph 14(a) and ESRS 2, paragraph 63(a) the undertaking shall:
- (a) indicate if policies relative to equipment, infrastructure and process maintenance; systematic identification and implementation of Best Available Techniques; and environmental quality monitoring around operational sites are in place; and briefly describe the policies, in accordance with ESRS 2, paragraph 63(b).
  - (b) disclose if the policies related to pollution prevention and control apply to all its operating sites and disclose the name of the sites which are not covered by the general policy.
39. The undertaking shall disclose its actions and resources on:
- (a) maintenance and inspection frequency of critical structures, namely:
    - i. mining slopes;
    - ii. tailings dams and ponds.
  - (b) to monitor the quality of the environment around its operational sites, namely the percentage of operational sites that have an environmental monitoring plan in operation.
  - (c) to remediate the effects of pollution from its operations on the environment in particular:
    - i. air pollution, in particular particulate matter (PM10, PM2.5 and PM1), SO<sub>2</sub> and CO;
    - ii. water pollution, in particulate leachate and acid drainage;
    - iii. soil contamination, e.g. heavy metals (Pb, As, Hg, Zn, Cd, Cr, etc) originating from mining tailings;
    - iv. use and disposal of substances of concern or substances of very high concern.
40. The undertaking shall disclose the pollution-related targets it has adopted with regards to the prevention and control of:
- (a) acid drainage;
  - (b) tailings from mining.
41. The undertaking shall report narrative examples of significant chronic pollution resulting from current or historical activity, and where violations of environmental quality limits are or have been frequent, may persist in time, or cause irreparable damages to the environment or people. The undertaking shall disclose on which sites such situations occur or have occurred.
42. The undertaking shall disclose the following metrics related to pollution prevention and control:
- (a) the number of cases an environmental quality limit has been violated for each monitored pollutant, as detected by its environmental monitoring network and practices. For the pollutants where an environmental quality limit has been violated, it shall also disclose how many pollutant measurements were taken during the reporting period.
43. In disclosing its policies related to pollution according to the sector agnostic E2-1 – Policies related to pollution the undertaking shall explain how it addresses:
- (a) spills and loss of containment events from tailings, chemicals or other hazardous materials used or produced in operations. In particular for substances of concern and substances of very high concern, the undertaking shall disclose policies on:
    - i. their use and disposal;

- ii. the approach for setting discharge limits;
- (b) tailings from mining, in particular:
  - i. implementation of policies to guarantee tailings storage structural integrity in the short, mid and long-term; and
  - ii. frequency of maintenance and inspection of critical infrastructure.

***Disclosure Requirement related to [draft] E2 Industrial hazards focus***

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- 44. In addition to the information provided following ESRS E2-1, E2-2, E2-3 and E2-4, the undertaking shall disclose its policies, targets, actions and metrics related to industrial hazards.
- 45. The undertaking shall explain how its implemented policies address the prevention of the industrial hazard risks associated with mining operations and emergency preparedness and response.
- 46. The undertaking shall disclose its actions and resources related to:
  - (a) actions related to industrial hazard prevention and emergency preparedness and response;
  - (b) report actions occurred during the reporting period related to past accidents impacts whose environmental remediation may still be on-going, including any actions that are planned for short, mid and long-term, if applicable;
- 47. The undertaking shall disclose the pollution-related targets it has adopted with regards to the prevention and control of:
  - (c) spills of chemical substances soil and water;
  - (d) tailings from mining.
- 48. For recorded significant spills that occurred during the reporting period, the undertaking shall disclose the total number, total volume and name of the substances released. For each significant spill, the undertaking shall disclose:
  - (a) location of spill (operational site or other location if applicable);
  - (b) volume of spill;
  - (c) material of spill, categorised by:
    - i. oil spills (soil or water surfaces);
    - ii. fuel spills (soil or water surfaces);
    - iii. spills of waste (soil or water surfaces);
    - iv. spills of chemicals (mostly soil or water surfaces), and
    - v. other;
  - (d) a description of the impacts of each spill; and
  - (e) how the undertaking defines a 'significant' spill.
- 49. The undertaking shall report narrative examples of significant acute pollution, as determined by the undertaking, as a consequence of industrial accidents when they have occurred in the reporting year or when their remediation is still active. The undertaking shall disclose on which sites such situations occur or have occurred.

***Disclosure Requirement related to [draft] E2 Closure of assets focus***

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- 50. In addition to the information provided following ESRS E2-1, E2-2, E2-3, E2-4, E2-5, E2- 6, the undertaking shall disclose its policies, targets, actions, metrics and financial effects related to closure of assets.

51. When disclosing information provided following ESRS E2-1, the undertaking shall indicate whether it has a policy addressing the systematic adoption of closure plans for operational sites addressing decommissioning, rehabilitation or restoration and monitoring of sites.
52. The undertaking shall disclose its pollution-related closure actions and resources, including:
  - (a) if a closure plan exists or is foreseen for each of its operational sites that have already reached the end of its operational life. If this is not the case, the undertaking shall disclose the list of sites for which there is no existing or foreseen site rehabilitation plan.
  - (b) the undertaking shall disclose for which sites it has on-going closure activities and resources related to pollution.
53. The undertaking shall disclose information about how it manages its responsibilities related to closure and post-closure of operational sites.
54. The undertaking shall disclose the material financial liabilities it expects to incur for closure and rehabilitation, per operational site, including [environmental and social] post-closure monitoring and aftercare for mine sites, in particular:
  - (a) amount recognized in the financial statements;
  - (b) undiscounted monetary value of a) split by relevant time bucket;
  - (c) discount rate used to calculate a);
  - (d) potential additional liabilities that do not meet the recognition criteria at the reporting date; and
  - (e) whether the operational site has been sold to a third party.

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***Disclosure Requirement related to [draft] ESRS E3-1 – Policies related to water and marine resources***

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55. In addition to disclosing the information required in sector agnostic Disclosure Requirement E3-1 *Policies and targets related to water and marine sources*, the undertakings shall include its interactions with water as a shared resource, particularly in water-stressed areas and where conflicts between different water uses may emerge.

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***Disclosure Requirement related to [draft] ESRS E4-2 Policies related to biodiversity and ecosystems***

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56. In addition to disclosing its policies implemented to manage its material impacts, risks and opportunities related to biodiversity and ecosystems, the undertaking shall describe whether its policies address:
  - (a) a phase-out of existing operations and/or stopping operational investments in or near key biodiversity areas. In case such policies are not in place, the undertaking shall disclose the policy provisions to minimize biodiversity and ecosystem impacts from current and future operations in or near these areas;
  - (b) the achievement of no net loss or a net gain to biodiversity on operational sites, whether these commitments apply to existing and future operations and whether they apply to operations other than those in or near key biodiversity areas;
  - (c) decommissioning of operational sites at their end-of-life, including the systematic implementation of site restoration plans.
57. The undertaking shall disclose if its policies implemented to manage material impacts, risks and opportunities related to biodiversity and ecosystems, according to ESRS E4-2, do not apply to one or more of its sites. In such case, the undertaking shall disclose which policies apply for those operational sites and, when for sites located in or near key biodiversity areas, if they are more stringent than the corporate wide policy.

***Disclosure Requirement related to [draft] ESRS E4-3 – Actions and resources related to biodiversity and ecosystems***

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58. The undertaking shall explain how the application of the mitigation hierarchy has resulted in:
- (a) areas protected through avoidance measures or offset measures;
  - (b) areas restored through on-site restoration measures or offset measures.
59. The undertaking shall disclose its biodiversity- related closure activities, including whether a site rehabilitation or restoration plan exists or is foreseen for each of its operational sites. If this is not the case, the undertaking shall disclose the list of sites for which there is no existing or foreseen site rehabilitation or restoration plan.
60. The undertaking shall disclose for which operational sites located in or near key biodiversity areas it has on-going closure activities and resources and shall provide examples of biodiversity management activities and adaptive management in place. This disclosure is not required for the sites for which the undertaking has assessed that it is not connected with a material potential or actual material impact.
61. The undertaking shall disclose the approach used to ensure respect for conservation status or endangered species habitat. The undertaking shall disclose this information at operational site level if it applies different approaches per (groups of) operational site(s).

***Disclosure Requirement related to [draft] ESRS E4-4 Targets related to biodiversity and ecosystems***

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62. In addition to disclosing according to ESRS E4-4 the undertaking shall disclose its targets related to:
- (a) minimising direct land-use change from mining activity; and
  - (b) maximising the percentage of impacted area rehabilitated or restored.

***Disclosure Requirement related to [draft] ESRS E4-5 Impact metrics related to biodiversity and ecosystems change***

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63. In addition to disclosing according to E4-5, the undertaking shall disclose significant impacts on biodiversity and ecosystems change using the following metrics:
- (a) direct land use change related to its operational sites in ha, as well as direct land use change in key biodiversity areas;
  - (b) percentage of land-use change area rehabilitated or restored during the reporting period differentiating and the percentage of land-use change area rehabilitated or restored in protected areas and key biodiversity areas;
  - (c) the total number of IUCN Red list species and national conservation list species with habitats in areas affected by the operations of the organisation and this by level of extinction risk.
64. The undertaking shall report metrics related to material biodiversity and ecosystem change impacts in accordance with ESRS E4-5, per each operational site located in or near protected areas and in key biodiversity areas. This disclosure is not required for the sites for which the undertaking has assessed that it is not connected with a material potential or actual material impact.

***Disclosure Requirement related to [draft] ESRS S1-1, S1-4 and S1-5 Policies, actions and targets related to own workforce***

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65. In addition to reporting according to the requirements of ESRS S1-1, S1-4 and S1-5 the undertaking shall disclose information related to working conditions for coal and mining own workers. Specifically, the undertaking's policy, actions and targets related to:

- (a) housing facilities for own workers and their access to basic services such as clean water, sanitation, and electricity as well as recreational facilities and social spaces;
- (b) working conditions and overtime when its workforce operates on long and split shifts; and
- (c) where applicable, work-life balance for workers in operational locations, specifically for those working in offshore operations.

***Disclosure Requirement [draft] ESRS S1- Work-related hazards focus***

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66. In addition to reporting on ESRS S1-1, 4 and 5 and ESRS S1-13 and 14, the undertaking shall provide information in relation to work-related hazards whose own workforce is exposed to in its operations.
67. The undertaking shall provide the following information:
- (a) for chemical hazards, a description of the substances of very high concern that workers are exposed to in its operations;
  - (b) for physical hazards, a description of the factors that contribute to these hazards, such as thermal strain and stress or noise and vibrations; and
  - (c) a description of ergonomic hazards.
68. The undertaking shall provide the following information in relation to policies, actions and targets in relation to:
- (a) its occupational health services that contribute to the minimisation of risks and identification and elimination of hazards;
  - (b) how it ensures the quality of occupational health services and facilitates workers' access to them; and
  - (c) occupational health and safety training provided to workers, including generic training as well as training on specific work-related hazards, hazardous activities, or hazardous situations.
69. The undertaking shall provide the following information in relation to metrics:
- (a) on health and safety indicators as a result of being exposed to chemicals, crystalline silica and dust and provide a breakdown between employees and non-employee workers in own workforce:
    - i. the number of work-related fatalities,
    - ii. the number of work-related injuries; and
    - iii. the number of cases of work-related ill health;
  - (b) the average hours of training related to the health, safety and emergency preparedness of employees, with respect to occupational risks or hazards to which employees are reasonably likely to be exposed. Such information shall be broken down by permanent employees, temporary employees and non-guaranteed hours employees.

***Disclosure Requirement [draft] ESRS S3 - Indigenous peoples' rights focus***

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70. In addition to reporting on ESRS S3-1 to ESRS S3-5, the undertaking shall provide information in relation to the indigenous peoples' rights.
71. The undertaking shall disclose:
- (a) its general approach to identifying indigenous peoples who are or could be affected by the undertaking's activities; and
  - (b) how it seeks to ensure safe and equitable gender participation when engaging with indigenous peoples.

72. The undertaking shall disclose whether the affected indigenous peoples are engaged throughout the tailings facility lifecycle in building the knowledge and in decisions that may have a bearing on public safety.
73. The undertaking shall disclose the following metrics in relation to seeking free, prior and informed consent (FPIC):
- (a) whether it has been involved in a process of seeking FPIC from indigenous peoples for any of its activities.
  - (b) If the undertaking has been involved in such processes, the following information is to be provided for the operational sites in question:
    - i. whether the process has been mutually accepted by the undertaking and the affected indigenous peoples; and
    - ii. whether an agreement has been reached, and if so, if the agreement is publicly available.

***Disclosure Requirement related to [draft] ESRS S3-1, S3-4 and S3-5 Policies, actions and targets related to affected communities.***

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74. In addition to reporting according to the requirements of ESRS S3-1, S3-4 and S3-5 the undertaking shall provide information on specific impacts that the undertaking can cause or contribute to on affected communities in relation to land and resources rights, including resettlement and closure of operational sites, and engagement with human rights and environmental defenders.
75. The undertaking shall disclose its policies, actions and targets in relation to land and resource rights and, specifically, on:
- (a) the recognition of legitimate tenure rights holders when acquiring, leasing or making other arrangements to use, or restrict the use of land;
  - (b) addressing involuntary resettlement, and the process for establishing compensation for loss of assets or other assistance to improve or restore standards of living or livelihoods;
  - (c) the use of the land after the closure of the operational site.
76. The undertaking shall disclose its policies, actions and targets in relation to human rights and environmental defenders and, specifically, on:
- (a) respecting and protecting the human rights and environmental defenders,
  - (b) preventing attacks against human rights and environmental defenders.
77. The undertaking shall describe the programs in place to enhance positive impacts or mitigate negative impacts involving Artisanal and Small-Scale Mining (ASM), and how engagement with local authorities and communities has informed them.

***Disclosure Requirement related to [draft] ESRS S3-2 Processes for engaging with affected communities***

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78. In addition to disclosing according to the sector agnostic ESRS S3-2 *Processes for engaging with affected communities about impacts*, the undertaking shall describe its processes for engaging with human rights and environmental defenders.
79. Where applicable, the undertaking shall disclose whether post-closure plans have been consulted with the affected communities.

### ***Disclosure Requirement related to [draft] ESRS G1-2 – Management of relationships with suppliers***

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80. In addition to disclosing according to the sector agnostic disclosure requirement ESRS G1-2, the undertaking shall disclose its policy with respect to the percentage of its procurement spending on suppliers local to that operation, when relevant for each operational site, or per group of operational sites within the same geographical area.

## **2. Sector-specific Disclosure Requirements**

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### ***Disclosure Requirement MIN 1 – Mapping of operational sites***

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81. **The undertaking shall disclose a list of its operational sites with specification of the sustainability matters to which they are connected.**
82. The objective of this Disclosure Requirement is to enable an understanding of which operational sites are connected with specific sustainability matters.
83. The undertaking shall present the list of the operational sites owned or operated under concession, permit or licence, where either:
- (a) the undertaking has financial control and/or operational control of the operational site;
  - (b) at least 5% of the undertaking's total saleable production comes from the operational site;
  - (c) the mining is an exploratory phase, not including sites where the undertaking only has a first right option to the subsequent possible exploratory activities.
84. For the purposes of this disclosure, the following are operational sites:
- (a) mines and the surface area disturbed by a mining operation, including but not limited to:
    - i. the surface area from which the nonferrous metallic minerals or refuse or both have been removed;
    - ii. the surface area covered by refuse, all lands disturbed by the construction or improvement of haulage ways, pipelines and pipeline corridors; and
    - iii. any surface areas in which structures, equipment, materials, and any other elements used in the mining operation are situated;
  - (b) quarries;
  - (c) tailing dams; and
  - (d) infrastructure and office buildings relating to the operations.
85. For each of the operational sites in the list, the undertaking shall include:
- (a) name and location (region);
  - (b) description of the minerals produced;
  - (c) NACE codes of the relevant activities;
  - (d) volume of production;
  - (e) status of the operational site, specifying whether the site is active, or closed and a rehabilitation plan is ongoing or planned, whether the site is undergoing closure activities, or whether the site has been rehabilitated;
  - (f) whether the operational site is connected with impacts related to social or environmental matters, including:

- i. whether the site is located in or near to a protected areas or a key-biodiversity area<sup>5</sup>, specifying the impacts to the affected habitats and ecosystems;
  - ii. whether the undertaking causes or contributes to material impacts on the local community, specifically, in relation to;
    1. indigenous peoples;
    2. land rights;
    3. infrastructure, including housing, food, water and sanitation, and power;
    4. pollution;
    5. toxic waste storage or disposal;
  - iii. whether the operational site is located in near conflict affected or high-risk areas; and
  - iv. whether involuntary resettlements have been caused or contributed to by the undertaking have taken place near the site.
86. The undertaking shall also disclose whether it has emergency preparedness and response plans in place for each of the mine sites. In case the undertaking has no emergency preparedness and response plans in place, the undertaking shall clarify the reasons why.
87. When identifying the operational site connected with a specific sustainability matter, the undertaking shall specify what it considers to be 'local' or 'near' for that particular site. It is expected that this will be assessed at a more granular level than national.

### ***Disclosure Requirement MIN 2 – Proved reserves***

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88. **The undertaking shall disclose its proved mineral reserves.**
89. The objective of this Disclosure Requirement is to enable an understanding of an undertaking's proved mineral reserves.
90. The undertaking shall disclose the percentage of proved mineral reserves broken down by those that are:
- (a) in conflict affected or high-risk areas;
  - (b) in or near indigenous land;
  - (c) in or near sites with protected conservation status;
  - (d) in or near endangered species habitat.
91. The undertaking shall, where relevant, provide a breakdown of calculations by mineral or business unit where minerals or business units include, for example: coal, aluminium, copper, zinc, iron ore, platinum group metals, and diamonds.

### ***Disclosure Requirement MIN 3 – Policy regarding CEN-Cenelec or ISO recommendations***

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92. **The undertaking shall disclose its policy in relation to the ISO or CEN-Cenelec recommendations.**
93. The objective of this Disclosure Requirement is to enable an understanding of an undertaking's compliance with European or global recommendations on management processes.
94. The undertaking shall disclose:

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

- (a) whether and to which extent its processes comply with the ISO or CEN-Cenelec recommendations relevant for the Sector;
  - (b) whether and when these have been reviewed or audited by an external assurance provider and found to conform to the corresponding ISO or CEN-Cenelec recommendations.
95. The undertaking may disclose:
- (a) whether and to which extent its processes comply with the general-purpose ISO or CEN-Cenelec recommendations; and
  - (b) whether and when these have been reviewed or audited by an external assurance provider and found to conform to the corresponding ISO or CEN-Cenelec recommendations.

### ***Environmental related requirements***

#### ***Disclosure Requirement MIN 4-E2 – Tailings facilities and impoundments***

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- 96. The undertaking shall disclose the list of its tailing's facilities and tailing impoundments classified according to their hazard potential.**
97. The objective of this Disclosure Requirement is enabling an understanding of the undertaking's management of its tailings facilities; the hazardous nature of the undertaking's tailing impoundments; and compliance with the Industry Standard with respect to the treatment of tailings.
98. The undertaking shall describe actions taken to:
- (a) prevent catastrophic failures of tailings facilities;
  - (b) manage impacts from tailings facilities, including during closure and post-closure; and
  - (c) manage the impacts of failures in the functioning of its tailings facilities, including but not limited to catastrophic failures.
99. In addition, the undertaking shall provide:
- (a) a description of the tailing facilities in place for each operational site, including legacy ones;
  - (b) the list of the tailing impoundments classified according to their hazard potential; and
  - (c) types of tailings disposal methods used by the undertaking.
100. The disclosure shall include, for each operational site, including legacy ones, the tailings facilities in place, their name, location, and ownership status. This disclosure is not required for the sites for which the undertaking has assessed that it is not connected with a material potential or actual material impact. The undertaking shall include:
- (a) a description of the tailing's facility;
  - (b) whether the facility is active, inactive, or closed;
  - (c) the date and main findings of the most recent risk assessment;
  - (d) the dates of the most recent and next independent technical reviews as well as their main findings;
  - (e) report the maximum permitted storage capacity and the total weight of tailings stored in metric tonnes; and
  - (f) the date of the next review.
101. The undertaking shall provide information about its waste-management process in case of deep-sea, river, lake and ocean tailings disposal and shall:

- (a) disclose the total amount of tailings waste and of mineral processing waste generated during the reporting period;
  - (b) report on the waste-management process followed and additional challenges faced considering the activities that take place underwater, if it engages on sea mining activities, coastal or deep sea, including the disposal of waste into the marine systems or other activities mentioned in ESRS E3 AR.12;
  - (c) disclose if tailings waste is being generated in deep-sea areas (Deep-Sea Tailings Disposal (DSTD)).
102. The undertaking shall disclose whether it follows any generally accepted good practices for safe management of tailings facilities and which standard or code of practice it uses. If the undertaking does not follow any generally standard or code of practice, it shall explain why.
103. The undertaking shall disclose the following information on the financial effects related to catastrophic failures:
- (a) available financial resources (including from insurance arrangements) to face potential future events and monetary amounts at risk;
  - (b) provisions recognised in the financial statements for past events;
  - (c) other expected costs, if applicable;
  - (d) description of how the amounts above have been estimated, including the key assumptions and inputs.

#### ***Disclosure Requirement MIN 5-E3 – Water withdrawal***

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- 104. The undertaking shall disclose the freshwater and other water withdrawal for its activities and from what sources the water is withdrawn from.**
105. The objective of this disclosure requirement is to enable an understand of the dependency of the undertaking on water withdrawals, as well as potential material impacts water withdrawals can have on local water resources and use.
106. The undertakings shall disclose the following indicators:
- (a) Total volume of water withdrawn from all areas in thousands of cubic meters ( $10^3\text{m}^3$ ), including a breakdown by:
    - i. Total freshwater divided by:
      - 1. surface water;
      - 2. groundwater.
    - ii. Other water:
      - 1. seawater;
      - 2. produced water and recycled process wastewater;
      - 3. third-party water.
  - (b) Total volume of water withdrawn from water stressed areas in thousands of cubic meters ( $1\text{ m}^3$ ), including a breakdown by:
    - i. Total Freshwater divided by:
      - 1. surface water;
      - 2. groundwater.
    - ii. Other water:
      - 1. seawater;
      - 2. recycled process wastewater;
      - 3. third-party water.

- (c) Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.
- (d) The undertaking shall report:
  - i. its actions to minimize water withdrawals in water stress areas;
  - ii. on which operational sites the mining activities have a significant impact on groundwater level and environmental-flows and what measures are put in place to counteract these effects.

### ***Disclosure Requirement MIN 6-E3 – Water discharge***

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- 107. **The undertaking shall disclose the volume, the destination, and the impacts of the water it discharges to the environment or exports to third parties; and the actions it may have taken to improve the quality of the water discharged.**
- 108. The purpose of this Disclosure Requirement is to enable an understanding of the impact of the undertakings' water discharges on local water resources and use.
- 109. The undertakings shall disclose the following information:
  - (a) total volume of water discharged to water stressed areas in thousands of cubic meters (1.000 m<sup>3</sup>), including a breakdown by:
    - i. freshwater;
    - ii. other water.
  - (b) any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used;
  - (c) the number of occasions on which discharge limits were exceeded and for which water quality parameters;
- 110. The undertaking shall report in which water basin its mining operations significantly impact hydrological conditions (e.g. drainage flows, hydrogeology, etc) and in which water basin these have or are likely to have a material impact on groundwater level and environmental-flows and what measures are put in place to counteract these effects.

### ***Social related requirements***

#### ***Disclosure requirement MIN 7-S1 – Work stoppages***

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- 111. **The undertaking shall disclose the work stoppages during the year.**
- 112. The objective of this Disclosure Requirement is to enable an understanding of the extent of worker disputes and their impact on the undertaking's operations.
- 113. The undertaking shall disclose:
  - (a) the number of major work stoppages,
  - (b) for each major work stoppage:
    - i. the percentage of employees involved;
    - ii. the number of employees involved;
    - iii. the length in days of each stoppage.
- 114. In addition, the undertaking may provide a description of the reasons (for example, worker disputes, affected communities' protests) for each major work stoppage and, where applicable, any steps taken to resolve each dispute.

### ***Disclosure Requirement MIN 8-S3– Security personnel***

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115. **The undertaking shall disclose the percentage of security personnel that has received training in the undertaking’s human rights policies within own workforce.**
116. The objective of this Disclosure Requirement is to enable an understanding of the extent to which the undertaking’s personnel are aware of its human rights policies and how these are respected when engaging with affected communities.
117. The undertaking shall disclose:
- (a) the percentage of security personnel that has received training in the undertaking’s human rights policies;
  - (b) whether the undertaking has performed internal audits and /or audited or certified by an external party in relation to compliance with its own human rights policies when engaging with affected communities;
  - (c) where applicable, the number of the identified incidents of violations of human rights of affected communities directly linked to its security personnel and an explanation of the type of violation.
118. The undertaking may explain if the training provided is aligned with the Voluntary Principles on Security and Human Rights.

### ***Disclosure Requirement MIN 9-S3 - Metrics on affected communities***

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119. The undertaking shall disclose metrics regarding engagement with affected communities and the performance of its grievance mechanisms.
120. The objective of this Disclosure Requirement is to enable an understanding of the material impacts, risks and opportunities of the undertaking on affected communities.
121. The undertaking shall disclose the following information for the operational sites listed in MIN 1:
- (a) whether all its operational sites have grievance mechanisms;
  - (b) the number and / or percentage of sites with grievance mechanisms or similar conflict resolution procedures.

In case that the undertaking does not operate local grievance mechanisms at the operational site level as these are at group or company level, it may fulfil this requirement by stating this to be the case. It may disclose its plans to develop grievance mechanisms at operational site level.

122. The undertaking shall disclose the percentage of operations with implemented local community engagement, impact assessments, and/or development programs, including the use of:
- (a) social impact assessments, including gender impact assessments, based on participatory processes;
  - (b) environmental impact assessments and ongoing monitoring;
  - (c) local community development programs based on local communities’ needs;
  - (d) works councils, occupational health and safety committees and other worker representation bodies to deal with impacts;
  - (e) whether the results of environmental and social impact assessments have been made public.
123. The undertaking shall disclose the following for the operational sites listed in MIN 1 and disclose at country level for material investments:
- (a) The extent of development of significant infrastructure investments (e.g. transport links, utilities) and services (e.g. community social facilities, health, and welfare centres) supported; and

- (b) whether these investments and services are commercial, in-kind, or pro bono engagements.

#### ***Disclosure Requirement MIN 10-S3 – Human rights and environmental defenders***

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- 124. The undertaking shall describe the number of (confirmed) incidents when engaging with human rights and environmental defenders.**
- 125. The objective of this Disclosure Requirement is to enable an understanding of its performance in relation to respect of human right and engagement with environmental defenders.
- 126. The undertaking shall provide the number of (confirmed) incidents with human rights and environmental defenders and identify those that relate to vulnerable groups.

#### ***Disclosure Requirement MIN 11-S3 – Resettlement***

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- 127. The undertaking shall disclose the operational site for which it has caused or contributed to voluntary or involuntary resettlement.**
- 128. The objective of this Disclosure Requirement is to enable an understanding of the negative impacts that arise from voluntary or involuntary resettlement caused or contributed to by the undertaking on affected communities.
- 129. The undertaking shall disclose whether it has caused or contributed to voluntary or involuntary resettlement or where such a resettlement is ongoing; in this case the undertaking shall disclose the operational site(s) involved.
- 130. The undertaking shall describe cases of involuntary resettlement required by its activities (where governments permit disclosure).

#### ***Disclosure requirement MIN 12-S3 – Workforce hired from local communities.***

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- 131. The undertaking shall disclose for each operational site identified in MIN 1, the percentage of workers hired from the local community.**
- 132. The objective if this disclosure requirement is to enable an understanding of the extent to which the undertaking's workforce comes from its local community.
- 133. The undertaking shall disclose:
  - (a) the percentage of top management that are recruited from the affected community;
  - (b) the percentage of workers hired from the local community, including indigenous communities.

#### ***Governance related requirements***

#### ***Disclosure Requirement MIN 13-G1 – Transparency about contracts with governments***

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- 134. The undertaking shall provide information about the transparency with respect to agreements with governments setting the terms and conditions for the exploitation of mineral resources.**
- 135. The objective of this Disclosure Requirement is to provide an understanding of the openness of the undertaking about its public contracts concluded and mining licences received.
- 136. For any material contract, license, concession, production-sharing agreement or other agreement granted by, or entered into with, a government which sets the terms and conditions attached to the exploitation of mineral resources, the undertaking shall disclose:
  - (a) whether such contracts are made publicly available and where they can be found; and
  - (b) for those public contracts or licenses not publicly available, the reason for this and if applicable, actions taken to publish in the future as well as the timetable to do so.

### ***Disclosure Requirement MIN 14-G1 – State-aid and competition***

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137. **The undertaking shall provide information concerning possible anti-competitive behaviour, the abuse of dominance, or the receipt of state aid during the reporting period.**
138. The objective of this disclosure requirement is to enable an understanding of possible anti-competitive behaviour of the undertaking during the reporting period as well as any state aid received.
139. The disclosure shall include the following information:
- (a) publicly announced notifications, preliminary investigations, investigations, proceedings or commitments and remedies relating to violations of antitrust and monopoly legislation or the receipt of state-aid where the undertaking was named as a participant by a competent authority; and
  - (b) the main outcomes of legal proceedings against the undertaking concluded during the reporting period, including sanctions, fines, commitments and remedies.
140. The undertaking shall also include the following with respect to state aid or financial assistance received from any government on a country-by-country basis:
- (a) tax relief and tax credits;
  - (b) subsidies;
  - (c) funds received through the Just Transition Mechanism of the EU;
  - (d) investment grants, research and development grants, and other relevant types of grants;
  - (e) awards;
  - (f) royalty holidays;
  - (g) financial assistance from Export Credit Agencies (ECAs);
  - (h) financial incentives;
  - (i) other financial benefits received or receivable from any government for any operation.
141. The undertaking shall also report the value of any thresholds that have been applied and any other contextual information necessary to understand how the project-level payments to governments reported have been compiled.

### ***Disclosure Requirement MIN 15-G1 – Beneficial ownership [to be discussed]***

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142. **The undertaking shall provide information about its beneficial ownership and how it identifies the beneficial owners of business partners, including joint ventures and suppliers.**
143. The objective of this Disclosure Requirement is to provide transparency about the undertakings beneficial owner(s) and to provide an understanding of its policy regarding the beneficial owners of its business partners, how these are identified and managed by the undertaking.
144. The undertaking shall list its beneficial owner(s) and shall disclose its policies and screening processes regarding politically exposed persons ('PEPs') and beneficial owners of business partners, including joint ventures and suppliers.

### ***Disclosure Requirement MIN 16-G1 – Cybersecurity [to be discussed]***

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145. **The undertaking shall disclose information about its cybersecurity during the reporting period.**

146. The objective this Disclosure Requirement is to enable an understanding of the undertaking's policies and management of risks regarding cybersecurity, preventing adverse impacts on people and the environment, as well as information about failures related to cybersecurity.
147. The undertaking shall disclose:
- (a) its policies relating to cybersecurity;
  - (b) its approach to cybersecurity management for existing operations, projects planned or underway and new locations for business activities, including assessment of threats, vulnerabilities and risks;
  - (c) the number of cybersecurity breaches including the number of operational sites impacted; and
  - (d) whether this involved classified or restricted information.

***Disclosure Requirement MIN 17-G1 – Mineral purchases from governments***

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- 148. The undertaking shall provide information about minerals purchased from governments or on their behalf during the reporting period.**
149. The objective of this disclosure requirement is to enable transparency about mineral purchases from the government and to provide insights into these transactions.
150. For minerals purchased from the state or from third parties appointed by the state to sell on their behalf, the undertaking shall disclose:
- (a) volumes and types of minerals purchased;
  - (b) full names of the buying undertaking(s) and the recipient of the payment; and
  - (c) payments made for the purchase.

## Appendix A: Defined terms

<b>Active conflict/ conflict affected or high-risk areas</b>	Areas in a state of armed conflict or fragile post-conflict as well as areas witnessing weak or non-existent governance and security, such as failed states, and widespread and systematic violations of international law, including human rights abuses
<b>Biosphere Reserves recognised within the framework of UNESCO's Man and the Biosphere (MAB) Programme</b>	Biosphere reserves are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located. Biosphere Reserves are designated under the intergovernmental MAB Programme by the Director-General of UNESCO following the decisions of the MAB International Coordinating Council (MAB ICC). Their status is internationally recognized.
<b>Coal proven reserves</b>	Coal proven reserves are estimated quantities that analyses of geological and engineering data have demonstrated to be economically recoverable in future years from known reservoirs and under current economic conditions, operating methods, and government regulations.
<b>Community development program</b>	A plan that details actions to minimise, mitigate or compensate for adverse social and/or economic impacts, and/or to identify opportunities or actions to enhance positive impacts of a project on the community.
<b>Critical incident</b>	An event that may adversely affect the undertaking and requires an immediate response. It is likely to cause significant personal illness or injury, substantial impact to operations and commercial prospects, a degradation of reputation, or lead to an impact on the wider community.
<b>Cyber security</b>	Cyber security relates to the practice of protecting electronic data, computer systems, servers, networks, mobile devices, tablet devices etc. from malicious criminal attacks, theft of sensitive data, and damage to IT systems.
<b>Energy recovery</b>	The use of combustible waste as a means to generate energy through direct incineration with or without other waste but with recovery of the heat.
<b>Government relations</b>	Government" refers to any national, regional or local authority of a Member State or of a third country. It includes a department, agency or undertaking controlled by that authority (Chapter 10, Report on Payments to Governments, 2013). Government relations is the process of influencing public and government policy at all levels previously outlined.
<b>Near (operational site located near a certain area)</b>	A facility, site or asset is "near" a certain area, if it can have a direct material impact on that area, irrespective of the actual distance that separates them.
<b>High-risk area</b>	High-risk areas are those where there is a high risk of conflict or of widespread or serious abuses as defined in paragraph 1 of Annex II of the OECD Guidance. Such areas are often characterized by political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure, widespread violence, and violations of national or international law.
<b>Human rights defender</b>	This is a term used to describe people who, individually or with others, act to promote or protect human rights in a peaceful manner. Human rights defenders are identified by what they do and it is

	through a description of their actions and of some of the contexts in which they work.
<b>Infrastructure</b>	Facilities built primarily to provide a public service or good rather than a commercial purpose, and from which an organization does not seek to gain direct economic benefit.
<b>Local communities</b>	These are defined as persons or groups of persons living and/or working in any areas that are economically, socially or environmentally impacted (positively or negatively) by an organization's operations. The local community can range from persons living adjacent to an organization's operations, to those living at a distance who are still likely to be impacted by these operations. The geographical definition of 'local', when referred to the impact on local communities, can include the community surrounding operations, a region within a country, or a country.
<b>Operational site</b>	Any location where an integral part of the mining business is performed.
<b>Politically Exposed Persons (PEP)</b>	An individual entrusted with a prominent public function.
<b>Probable reserves</b>	Reserves for which quantity and grade and/or quality are computed from information similar to that used for proven (measured) reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced.
<b>Recycled and remanufactured materials</b>	Waste materials that have been reprocessed or treated by means of production or manufacturing process and made into a final product or made into a component for incorporation into a product.
<b>Reduced environmental impact products</b>	Products that have reduced environmental impacts at various lifecycle stages, including during material sourcing, manufacturing, and product usage.
<b>Reserves</b>	Part of a mineral deposit which could be economically and legally extracted or produced at the time of the reserve determination.
<b>Spills</b>	Spills are accidental release of hazardous substances such as chemicals, oils, fuels and other substances. They can affect water, soil and air quality as well as biodiversity and human health.
<b>Significant spills</b>	Spill that is included in the organization's financial statements, for example due to resulting liabilities, or is recorded as a spill by the organization.
<b>State aid</b>	<p>State aid is defined as an advantage in any form whatsoever conferred by national public authorities to undertakings on a selective basis. Therefore, subsidies granted to individuals or general measures open to all enterprises are not covered by this prohibition and do not constitute State aid (examples include general taxation measures or employment legislation).</p> <p>To be State aid, a measure needs to have these features:</p> <ul style="list-style-type: none"> <li>• there has been an intervention by the State or through State resources which can take a variety of forms (e.g. grants, interest and tax reliefs, guarantees, government holdings of all or part of a company, or providing goods and services on preferential terms, etc.);</li> <li>• the intervention gives the recipient an advantage on a selective basis, for example to specific companies or industry sectors, or to companies located in specific regions</li> <li>• as a result, competition has been or may be distorted;</li> <li>• the intervention is likely to affect trade between Member</li> </ul>

	<p>States.</p> <p>Despite the general prohibition of State aid, in some circumstances government interventions are necessary for a well-functioning and equitable economy. Therefore, the Treaty leaves room for a number of policy objectives for which State aid can be considered compatible. These exemptions can be found in legislation relevant to State aid.</p> <p>For non-EU countries, state aid refers to financial assistance received from any government.</p>
<b>Tailings</b>	<p>A by-product of mining, consisting of the processed rock or soil left over from the separation of the commodities of value from the rock or soil within which they occur.</p> <p>Poor management or design of tailings facilities can lead to leaks or collapses, with serious impacts on local communities, livelihoods, infrastructure, and the environment. Failures can result from inadequate water management, overtopping, foundation or drainage failure, erosion, and earthquakes. Impacts become more severe when tailings contain high levels of bioavailable metals or hazardous chemicals.</p>
<b>Total addressable market</b>	<p>The potential revenue (in billions of EUR) should the undertaking capture 100 percent of the market share of the product category (e.g., the global market for reduced environmental impact building products).</p>
<b>Waste</b>	<p>Any substance or object which the holder discards or intends or is required to discard.</p>

## Appendix B: Application Requirements

This Appendix is an integral part of the proposed [draft] ESRS Mining, Quarrying and Coal. It supports the application of the requirements set for in paragraphs 22 to 150 and has the same authority as the other parts of the [draft] Standard.

### 1. Application Requirements related to sector-agnostic Disclosure Requirements

#### ***Application Requirement related to [draft] ESRS 2 GOV 4 - Statement on sustainability due diligence***

- AR 1. When disclosing a mapping of the information provided in its sustainability statements about the sustainability due diligence process, the undertaking whose activities relate to the following Supplements in the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas shall map the core elements from the OECD due diligence guidance. This in addition to the UN Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises mentioned in the agnostic disclosure.
- (a) the Supplement on Tin, Tantalum and Tungsten of the bespoke OECD Due Diligence Guidance;
  - (b) the Supplement on Gold of the bespoke OECD Due Diligence Guidance;
  - (c) other areas specified in the conflict minerals regulation.
- AR 2. The undertaking shall include procurement in its mapping as well as environmental factors. This may be presented in a table in a similar form to the table presented below.

Core elements	Paragraphs in the sustainability matters
OECD Due diligence guidance for Responsible Supply chains of Minerals from Conflict-Affected and High-Risk areas	
Establish strong management system	
Identify and assess risk in the supply chain	
Carry out independent third-party audit of supply chain due diligence at identified points in the supply chain	
Report on supply chain due diligence	

#### ***Application requirement related to [draft] ESRS 2 SBM 1 - Market position, strategy, business model(s) and value chain***

- AR 3. The scope of products includes those:
- (a) with product attributes that reduce energy consumption or increase energy efficiency for users, such as by providing improved insulation as compared to typical products;
  - (b) with process or product attributes that reduce the amount water required in manufacturing, during product assembly, or product usage;
  - (c) that use secondary or recycled materials in place of virgin materials such that upstream impacts are reduced; and

- (d) made with design innovations that lower carbon emissions during manufacturing, such as use of renewable fuels, energy efficiency improvements, or the use of materials requiring less processing.
  - (e) the market share for reduced environmental impact products that the undertaking currently captures with its products, shall be calculated as revenues from these products divided by the size of the total addressable market.
- AR 4. The undertaking may provide a projection of growth of this market, where the projected addressable market is represented – based on a reasonable set of assumptions about changes in market conditions – as a percentage of year-on-year growth or as an estimate of the market size after a defined period (i.e., the market size in 10 years).
- AR 5. The undertaking may disclose its target three-year market share as a measurement of targeted growth, where the target is the percentage of the total addressable market that the undertaking plans to address over a three-year time horizon.

***Application Requirement related to [draft] ESRS 2 SBM 2 - Interests and views of stakeholders***

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- AR 6. When disclosing how the undertaking engages with its stakeholders in compliance with ESRS 2 SBM-2, the undertaking shall describe how it incorporates the OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractives Sector, and in particular how it engages with affected stakeholders.
- AR 7. Furthermore, the undertaking shall consider the following:
- (a) the approach to identifying stakeholders within local communities;
  - (b) a description of the vulnerable groups that the organisation has identified within local communities by mine site.

***Application Requirement related to [draft] ESRS 2 SBM 3 - Material impacts, risks and opportunities and their interaction with strategy and business model(s)***

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- AR 8. When disclosing its impacts on its own workforce and the local community, the undertaking shall consider disclosing:
- (a) the undertaking's policies, actions and targets to help own workers and non-employee workers manage the adverse impacts arising from the closure of its operational site(s);
  - (b) the labour transition plans in place to help workers manage the transition to a post-closure phase of operations (e.g., redeployment, assistance with redeployment, resettlement, and redundancy payments, training and skills programmes);
  - (c) the collaborative efforts, projects and programs that are set up to manage the socio-economic impact of closure and restoration programs and disclose these.
  - (d) how it engages with worker and other stakeholders in informing the closure plans, as well as notice periods regarding closure.
  - (e) The undertaking with coal mining operations when disclosing the results of the resilience analysis including the results from the use of scenario analysis (E1-SBM3) shall consider disclosing how future energy demand scenarios may affect its determination of proven reserves.

***Application Requirement related to [draft] ESRS 2 IRO 1 - Description of the processes to identify and assess material climate-related impacts, risks and opportunities***

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- AR 9. The undertaking shall analyse the resilience of its current proven and probable reserves using the price trajectories published by the International Energy Agency (IEA) in its World Energy Outlook (WEO) publication, including:

- (d) current Policies Scenario, which assumes no changes in policies from the mid-point of the year of publication of the WEO;
- (e) new Policies Scenario, which assumes that broad policy commitments and plans that have been announced by countries-including national pledges to reduce greenhouse gas emissions and plans to phase out fossil energy subsidies-occur, even if the measures to implement these commitments have yet to be identified or announced. This broadly serves as the IEA baseline scenario;
- (f) Sustainable Development Scenario, which assumes an energy pathway occurs that is consistent with the goal of limiting the global increase in temperature to 1.5°C by limiting concentration of greenhouse gases in the atmosphere.

AR 10. The undertaking shall consider the WEO scenarios as a normative reference, thus any updates to the WEO made year-on-year shall be considered updates to this guidance.

AR 11. The undertaking may summarise its findings in the following table format:

Price case	Proven reserves		Probable reserves (voluntary disclosure)	
	Product A (measure)	Product B (measure)	Product A (measure)	Product B (measure)
Current policies scenario (base)				
New policies scenario				
Sustainable development scenario				

AR 12. The undertaking may disclose the resilience of its reserve levels in other price and demand scenarios in addition to those described above, particularly if these scenarios differ depending on the type of coal reserves, regulatory environment in the countries or regions where mining occurs, end-use of the undertaking’s products, or other factors.

AR 13. For additional resilience analyses, the undertaking should consider disclosing the following, per the Task Force on Climate Related Financial Disclosures (TCFD) Recommendations Report Figure 8 as well as the Implementing the Recommendations of the TCFD Report, Section E:

- (g) the alternative scenarios used, including other 2°C or lower scenarios;
- (h) critical input parameters, assumptions, and analytical choices for the climate-related scenarios used, particularly as they relate to key areas such as policy assumptions, energy deployment pathways, technology pathways, and related timing assumptions;
- (i) time frames used for scenarios, including short-, medium-, and long-term milestones (e.g., how organizations consider timing of potential future implications under the scenarios used).

AR 14. When the undertaking is conducting its materiality assessment on affected communities, the undertaking shall consider how it addresses any risks related to free, prior, and informed consent from indigenous peoples in countries without regulation or processes in place. It may disclose whether as part of its materiality assessment it performs a risk assessment for new country entry before the subscription of a contract in a new country of operations which would in turn be part of its double materiality assessment.

### ***Application Requirement related to [draft] ESRS E1-1 Transition plan for climate change mitigation***

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AR 15. The undertakings with coal mining or peat operations, when disclosing information on DR E1-1[16(d)] on potential locked-in GHG emissions from the undertaking's assets and products, shall consider the emissions potential of proved reserves of their coal and peat assets and shall calculate this potential considering the recommendations [*Russel, Stephen (2016) "A recommended methodology for estimating and reporting the potential greenhouse gas emissions from fossil fuel reserves", World Resource Institute, 2016*] and [*Handbook for Assessment of Greenhouse Gas Emissions from Peatlands, Life Peat Restore, 2022*]

### ***Application Requirement related to [draft] E1 Methane focus***

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AR 16. When disclosing its policies, actions and resources related to methane emission management, the undertaking shall consider the following sources:

- (a) Methane emissions from operating mines:
  - i. methane emissions from all ventilation shafts in use by the mine operator;
  - ii. methane emissions from drainage stations and from the methane drainage system, whether occurring as a result of intentional or unintentional venting, or incomplete combustion in flares;
  - iii. methane emissions occurring during post-mining activities.
- (b) Methane emissions from operating surface:
  - i. methane emissions occurring at the coal mine during the mining process;
  - ii. methane emissions occurring during post-mining activities.

AR 17. In relation to the application of best practice in coal methane emission management, companies may refer to the "Best Practice Guidance for Effective Management of Coal Mine Methane at National Level: Monitoring, Reporting, Verification and Mitigation" from UNECE.

AR 18. When disclosing under paragraph [XX, methane targets] the undertaking may consider the "Guidelines for Methane emissions target setting" issued by GIE (Gas Infrastructure Europe), IOGP (International Association of Oil & Gas Producers) and marcogaz (Technical association of the European gas industry).

### ***Application Requirement related to [draft] ESRS E1-6 - Gross scopes 1, 2, 3 and total GHG emissions***

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AR 19. The undertaking with coal mining operations shall consider reporting their Scope 3, Use of sold products based on the volumes of coal sold during the reporting period instead of coal produced (this is quantities in stock shall not be considered).

### ***Application Requirement related to [draft] E2 Pollution prevention and control focus***

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AR 20. The undertaking shall consider if its policy to manage pollution should include:

- (a) The implementation of a certified and regularly audited Environmental Management System (EMS), according to a recognized international standard, covering all its operating sites and indicating any sites that do not have an EMS certified according to a recognized international standard or that are not regularly audited for their performance in relation to pollution;
- (b) Aspects on the monitoring of environmental impacts related to pollution for mining operations, namely:
  - i. existence of environmental monitoring for all or sites with material IROs;
  - ii. frequency of monitoring for key parameters;

- iii. if it uses a network of air quality monitoring stations near its operational sites for key air quality parameters (e.g. PM10, NOx, CO, CH4);
    - iv. if it uses a network of water quality monitoring stations on water bodies near its operational sites for key water quality parameters (e.g. flow volumes, turbidity, pH, heavy metals);
    - v. if it does regular campaigns to assess levels of soil pollution and ground water quality near its operational sites, namely for heavy metal (arsenic, lead, cadmium, mercury) and cyanide contamination;
    - vi. if it does regular noise monitoring campaigns from operations in particular when operating near human settlements;
  - (c) particular issues related with pollution associated with mining activity, such as:
    - i. the use and disposal and the approach for setting discharge limits for substances of concern and substances of very high concern;
    - ii. particular particulate matter (dust, silica) (PM10, PM2.5 and PM1) emissions;
    - iii. leachate and acid drainage;
    - iv. soil contamination with heavy metals (Pb, As, Hg, Zinc, Cd, Cr).
- AR 21. When disclosing its environmental monitoring plans, the undertaking shall consider the Report on Monitoring of Emissions to Air and Water from IED Installations ([JRC, 2018](#)).
- AR 22. The undertaking shall consider the application of Best Available Techniques for the prevention and pollution control, as identified in the Best Available Techniques (BAT) Reference Document for the Management of Waste from Extractive Industries ([JRC, 2018](#)).
- AR 23. The undertaking may specify to which layer in the mitigation hierarchy an action plan and resources can be allocated to:
- (a) avoid pollution including any phase out of materials/compounds that have a material negative impact (prevention of pollution at source);
  - (b) reduce pollution (minimisation), including by meeting BAT requirements in the future;
  - (c) restore and regenerate ecosystems where pollution occurred (control of the impacts both from regular activities and incidents);
  - (d) transform ecosystem e.g. through technological, economic, institutional, and social factors;
  - (e) meet enforcement requirements or future compliance needs such as meeting BAT requirements, or any phase out of materials/compounds; and
  - (f) address failures to comply with Do-No-Significant-Harm criteria for pollution prevention and control according to the EU Taxonomy Regulation and its Delegated Acts.
- AR 24. The undertaking shall consider which actions it has implemented or planned to prevent or mitigate negative impacts from acid mine drainage including which mine sites acid mine drainage is:
- (a) predicted to occur;
  - (b) has not been actively mitigated, and
  - (c) is not under treatment or remediation.
- AR 25. The undertaking shall consider disclosing:
- a. per operational site, the volume of pollutants and significant emissions over the reporting period;
  - b. significant emissions, in kilograms or multiples, of the pollutants mentioned in [draft] ESRS E2-4;

- c. any other pollutant relevant for its environmental management.
- (d) When compiling the information specified in the Disclosure Requirement related to ESRS E2-4, the undertaking shall consider explaining:
  - a. The source of the emission factors used;
  - b. The standards, methodologies, assumptions, and/or calculation tools used, including of the following approaches for calculating significant air emissions:
    - i. direct measurement of emissions (such as online analysers).
    - ii. calculation based on site-specific data.
    - iii. calculation based on published emission factors.
    - iv. other estimating methods.
- (e) For the reporting of number of spills the undertaking shall rely on the pollutants listed in ESRS E2, AR 21 till AR26 as well as the definitions of substances of concern and substances of very high concern defined in Appendix A to ESRS 2 Pollution. In one incident multiple pollutants can be involved.
- (f) The most relevant pollutants for Mining and Quarrying are:
  - a. Hydrogen cyanide;
  - b. PM 10 & PM 2.5;
  - c. Carbon Monoxide;
  - d. Ground Level ozone;
  - e. Hydrogen sulphide;
  - f. dioxins/furans, including but not limited to, the sum of the 17 congeners of polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) that contain chlorine.
  - g. volatile organic compounds (VOCs),
  - h. polycyclic aromatic hydrocarbons (PAHs),
  - i. pollutants released into water through the mining process while included in the EQSD list of chemicals (Directive 2008/105 of 16 December 2008 on environmental quality standards in the field of water policy)

***Application Requirement related to [draft] E2 Industrial hazards focus***

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- AR 26. When disclosing to paragraph [44] the undertaking shall consider disclosing:
- (a) per operational site, the volume of pollutants and significant emissions over the reporting period;
  - (b) significant emissions, in kilograms or multiples, of the pollutants mentioned in [draft] ESRS E2-4;
  - (c) any other pollutant relevant for its environmental management.
- AR 27. When compiling the information specified in the Disclosure Requirement related to ESRS E2-4, the undertaking shall consider disclosing:
- (a) the source of the emission factors used;
  - (b) the standards, methodologies, assumptions, and/or calculation tools used, including of the following approaches for calculating significant air emissions:
    - i. direct measurement of emissions (such as online analysers).
    - ii. calculation based on site-specific data.
    - iii. calculation based on published emission factors.

- iv. other estimating methods.

AR 28. For the reporting of number of spills the undertaking shall rely on the pollutants listed in ESRS E2, AR 21 till AR 26 as well as the definitions of substances of concern and substances of very high concern defined in Appendix A to ESRS 2 Pollution. In one incident multiple pollutants can be involved.

#### ***Application Requirement related [draft] ESRS E2 Closure of assets focus***

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AR 29. In providing the Disclosure requirement related to ESRS E2-6, paragraphs [44] and [45] on closure and rehabilitation costs, the undertaking shall consider the costs necessary to address:

- (a) Adverse impacts of closure of the operational site on own workers, non-employee workers and their communities (DR related to ESRS2 SBM 3); and
- (b) Restoration of material impacts to biodiversity and ecosystems around the closed operational site (DR related to ESRS E4-2).

#### ***Application Requirement related to [draft] ESRS E3-4 Water consumption***

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AR 30. The undertaking shall consider disclosing information on its water consumption performance according to [draft] ESRS E3-4, per operational site thereby developing a water footprint indicator and how it evolves over time.

AR 31. Mining activities can reduce water availability for local communities and other sectors that rely on water. They can have impacts on the quality of surface water, groundwater, and seawater, which can translate into long-term impacts on ecosystems and biodiversity, cause health and development problems for humans, and impair food security.

AR 32. Water is used in mining activities for cooling and cutting; dust suppression during mining and hauling; washing to improve ore quality; re-vegetation of surface mines; and long-distance ore slurry transportation. The amount of water needed for activities depends on whether mining occurs on the surface or underground and on operational efficiency.

AR 33. The amount of water withdrawn also varies according to an undertaking's ability to substitute the use of freshwater, the quality of water required, reservoir characteristics, and recycling infrastructure.

#### ***Application Requirement related to [draft] ESRS E4-3 Actions and resources related to biodiversity and ecosystems***

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AR 34. The undertaking shall consider disclosing rehabilitation and restoration plans for operational sites in or near key biodiversity areas.

AR 35. Rehabilitation seeks to ensure the long-term stability of soils, landforms and hydrology required for the site to establish and sustain a natural ecosystem or vegetation that aligns with the agreed future land use. The second main purpose of rehabilitation is to partially or fully repair the capacity of ecosystems to provide habitats for biota and services for people.

AR 36. Restoration attempts to return local ecosystem to a previous reference natural status and should be based on an appropriate local indigenous reference ecosystem. It includes local indigenous plants, animals and other biota characteristics of the pre-degradation ecosystem.

AR 37. Rehabilitation and restoration may be further defined by local, regional, or national laws, industry standards, or the undertaking's own guidelines. The undertaking shall consider disclosing its definition of rehabilitation and restoration and accompanying practices it follows.

AR 38. Rehabilitation and restoration plans should address the following objectives:

- (a) the long-term stability and sustainability of the landforms, soils and hydrology of the site;

- (b) the partial or full repair of ecosystem capacity to provide habitats for biota and services for people;
  - (c) the prevention of pollution of the surrounding environment.
  - (d) In the description of its Restoration Plans, the undertaking shall include:
  - (e) A baseline assessment of the local environment pre-mine, which shall include:
    - i. The affected ecosystem types;
    - ii. The affected ecosystem size in hectares;
    - iii. The affected ecosystem initial condition;
    - iv. The affected species names;
    - v. The affected species extinction risk;
    - vi. A list of the significant ecosystem services and beneficiaries that will be affected by the undertaking's operations;
    - vii. An explanation of how the ecosystem services and beneficiaries will be affected;
    - viii. Standards, methodologies, assumptions use to make this assessment.
  - (f) A description of the risks for biodiversity and ecosystems;
  - (g) A description of real impacts on biodiversity and ecosystems:
    - i. Report the size in hectares and the type of natural ecosystem converted since the cut-off date or reference date;
    - ii. Report the current state of the ecosystem;
    - iii. Report the current state of species.
    - iv. Standards, methodologies, assumptions use to make this assessment.
  - (h) A description of the goal of the restoration plan (converting the area to a safe and stable condition, restoring the area to pre-mining conditions as closely as possible, near-natural restored ecosystem, reinstating ecosystem functionality or land productivity, etc.)
  - (i) A description of restoration activities and their implementation;
  - (j) Monitoring performance of the restoration activities;
  - (k) Results of the restoration activities.
  - (l) Additional actions to offset negative impacts and transformative actions, including additional conservation actions by the undertaking.
  - (m) To ensure long-term quality of the Restoration process, the undertaking shall:
    - i. Describe their legacy policy on restoration;
    - ii. Describe the quality of the Restoration Plan in relation to local communities;
    - iii. Consider Long-term liabilities, describing the continuation of the Restoration Plan if the area is sold or leaves the undertaking's possession.
- AR 39. Different mining methods present distinct risks for biodiversity. Open-pit mines generate more severe impacts than underground mines due to the progressive deepening and widening of the mining site, increasing affected areas over time. Impacts on biodiversity can result from:
- (a) residual impacts after all other measures have been applied.
  - (b) land clearance for pits, access routes, and expansion into new areas;
  - (c) habitat fragmentation from access roads and other linear infrastructure;

- (d) ground subsidence from underground mines;
- (e) disruption of surface water, wetland, and groundwater ecosystems; and
- (f) effluent discharges, groundwater, or surface water contamination from acid mine drainage, tailings ponds, or overburden piles.

***Application Requirement related to [draft] ESRS E5-5 Resource use and circular economy***

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- AR 40. When disclosing about its waste according to Disclosure Requirement E5-5, the undertaking shall consider the different categories of waste according to the European Waste Catalogue ([Directive 2006/21 of 15 March 2006 on the management of waste from extractive industries](#)).

***Application Requirement related to [draft] ESRS S1-1, S1-4 and S1-5 Policies, actions and targets related to own workforce***

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- AR 41. [ To include the proposal to incorporate the vulnerable groups' lens ]

***Application Requirement related to [draft] ESRS S1 – Work-related hazards focus***

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- AR 42. [ To include the proposal to incorporate the vulnerable groups' lens ]

***Application requirement related to [draft] ESRS S1-11 Social protection***

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- AR 43. In addition to disclosing how its own workers are covered against loss of income due to major life events in [draft] ESRS S1-11, the undertaking may disclose whether all workers in its own workforce are covered by non-occupational medical healthcare services through public programs or through benefits offered by the undertaking.
- AR 44. For the workers who do not have their non-occupational medical healthcare services through public programs the undertaking may disclose:
- (a) how the undertaking facilitates workers' access to non-occupational medical and healthcare services, including the scope of their access;
  - (b) a description of voluntary health promotion services and programs offered to workers that address major non-work-related health risks and how the organisation facilitates workers' access to these services and programs.
- AR 45. Voluntary health promotion programs and services may include:
- (a) smoking cessation programs
  - (b) dietary advice
  - (c) offering of healthy food in the canteen
  - (d) stress-reducing programs
  - (e) provision of a gym or
  - (f) fitness programs.
- AR 46. A program or service is voluntary when it does not set mandatory personal targets, and if incentives are provided, these are not associated with the undertaking's decisions regarding employment or engagement of workers.
- AR 47. In addition, voluntary health promotion services and programs complement but cannot be a substitute for occupational health and safety services, programs and systems that prevent harm and protect workers from work-related injuries and ill health. Voluntary health promotion and occupational health and safety may be managed jointly by the undertaking, as part of an overall approach to ensuring the health and safety of workers.
- AR 48. When describing how it facilitates workers' access to voluntary health promotion services and programs, the undertaking may consider disclosing whether it allows workers to make use of

these during paid working hours. The undertaking may also report if these services and programs are available for family members of workers.

***Application Requirement related to [draft] ESRS S1-Appendix B.1 – Application Requirements for ESRS 2 related disclosures***

AR 49. These application requirements support the application of the requirements from ESRS 2 described in paragraphs 15-19. It provides a non-exhaustive list of the factors to be considered by the undertaking when complying with ESRS 2 SBM-2 and ESRS 2 SBM-3.

<b>Social and human rights matters</b>	<b>Non-exhaustive list of factors to consider in Materiality Assessment</b>
<b>Secure employment</b>	% of posted workers in own workforce
<b>Working time</b>	% of workers regularly working multi-day away-from-home assignments % of workers regularly working evening shifts % of workers regularly working night shifts % of workers regularly working on Saturdays and/or Sundays
<b>Adequate wages</b>	Allowances for housing for away-from-home assignments
<b>Freedom of association/ collective bargaining including the rate of workers covered by collective agreements</b>	% of workers affected by work stoppages

***Application Requirement related to [draft] ESRS S1-Appendix B.2 - Application Requirements for ESRS S1-1 Policies related to own workforce***

AR 50. These application requirements support the application of the requirements from ESRS S1-1. It provides examples to be considered when complying with the aforementioned Disclosure Requirement.

<b>Social and human rights matters</b>	<b>Examples of policies</b>
<b>Secure employment</b>	Policies on the use of non-employee workers in the workforce
<b>Working time</b>	Policies on advance notice of scheduling, multi-day away-from-home assignments, and evening, night and weekend work
<b>Adequate wages</b>	Policies for housing allowances
<b>Freedom of association/ collective bargaining including the rate of workers covered by collective agreements</b>	% of workers affected by work stoppages

***Application Requirement related to [draft] ESRS S1-Appendix B.3 – Application Requirements for ESRS S1-4 Taking action on material impacts on own workforce, and***

***approaches to mitigating material risks and pursuing material opportunities related to own workforce, and effectiveness of those actions***

AR 51. These application requirements support the applications of the requirements of ESRs S1-4. It provides examples to be considered when complying with the aforementioned Disclosure Requirement.

<b>Social and human rights matters</b>	<b>Examples of actions</b>
<b>Secure employment</b>	Reducing the percentage of non-employee workers in its own workforce
<b>Working time</b>	Increased percentage of workers with regular schedules Increased advance notice of scheduling Reducing percentage of multi-day away-from-home assignments, and evening, night and weekend work
<b>Adequate wages</b>	Increasing housing allowances
<b>Freedom of association/ collective bargaining including the rate of workers covered by collective agreements</b>	Percentage of workers affected by work stoppages

***Application Requirement related to [draft] ESRS S1-Appendix B.4 – Application Requirements for ESRS S1-5 Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities***

AR 52. These application requirements support the applications of the requirements of ESRs S1-4. It provides examples to be considered when complying with the aforementioned Disclosure Requirement.

<b>Social and human rights matters</b>	<b>Examples of targets</b>
<b>Secure employment</b>	Reducing the percentage of non-employee workers in its own workforce
<b>Working time</b>	<ul style="list-style-type: none"> <li>• Increased percentage of workers with regular schedules</li> <li>• Increased advance notice of scheduling</li> <li>• Reducing percentage of multi-day away-from-home assignments, and evening, night and weekend work</li> </ul>
<b>Adequate wages</b>	Adequate housing allowances
<b>Freedom of association/ collective bargaining including the rate of workers covered by collective agreements</b>	Percentage of workers affected by work stoppages

***Application Requirement related to [draft] ESRS S3 – Indigenous peoples’ rights focus***

AR 53. When describing responding to ESRS S3-2, the undertaking shall consider:

(a) its due diligence practices and procedures with respect to indigenous rights of communities in which it operates or intends to operate, specifically: upholding internationally recognized rights of Indigenous peoples, including but not limited to

those recognized by the UN declaration on the Rights of Indigenous Peoples, and the ILO Convention No. 169;

- (b) the use of free, prior, and informed consent (FPIC) (or consultation) processes as per the United Nations Declaration on the Rights of Indigenous Peoples;
- (c) The undertaking shall also consider the governance mechanisms that has been put in place to ensure that its policies and practices followed by the undertaking.

### ***Application Requirement related to [draft] ESRS S3-1, S3-4 and S3-5 Policies, actions and targets related to affected communities***

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#### ***Policies***

- AR 54. When disclosing its policies related to land acquisition and involuntary resettlement, the undertaking may disclose if it has included a gender perspective in them.
- AR 55. In relation to its disclosure on the policies of preventing attacks on human rights and environmental defenders, the undertaking may disclose whether it adopts a zero-tolerance approach for attacks against human rights and environmental defenders, and not to sue for defamation or to participate in strategic lawsuits against public participation (SLAPP).

#### ***Taking action on material impacts, risks and opportunities***

- AR 56. The undertaking shall consider the impacts on affected communities that stem from the undertaking's impacts on biodiversity when disclosing the actions that are planned or underway to address negative impacts on these affected communities. The undertaking shall consider the principles in the Nagoya Protocol and the Montreal Agreement. The undertaking may refer to how the actions that are planned or underway are aligned to these frameworks.
- AR 57. If the undertaking has an operation site in or near indigenous lands as listed in MIN 1 the undertaking shall consider:
- (a) its interactions with indigenous peoples, including but not limited to means of communication, language used, frequency;
  - (b) where applicable, the co-ownership programs developed for indigenous peoples and local communities. This includes equity shares acquired by communities and their value;
- AR 58. In addition, the undertaking may disclose the approach taken in recognising the legitimate tenure rights holders when acquiring, leasing or making other arrangements to use, or restrict the use of, land as well as to providing remediation following involuntary resettlement either through monetary or asset compensation

### ***Application Requirement related to [draft] ESRS S3-2 Processes for engaging with affected communities about impacts***

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- AR 59. The undertaking shall consider listing the vulnerable groups, including any indigenous peoples, that it has identified within local communities and the approach to engaging with those vulnerable groups, including:
- (d) how it seeks to ensure meaningful engagement; and
  - (e) how it seeks to ensure safe and equitable gender participations, namely how it seeks to ensure Indigenous women can participate safely and equitably.
- AR 60. When disclosing the engagement with human rights and environmental defenders, the undertaking shall consider its processes for engaging with human rights and environmental defenders as part of its due diligence processes, including on managing allegations of retaliations, threats and direct/indirect attacks (physical and legal – including all forms of judicial harassment) against defenders.
- AR 61. The description of how an undertaking engages with local communities shall also consider an explanation on how the land will be used ex post the closure of the operational site. Where

- applicable, the undertaking shall develop such post-closure plans in consultation with local communities.
- AR 62. The undertaking may describe any collective or individual rights that it has identified that are of particular concern for local communities (including vulnerable groups).
- AR 63. At the end of their commercial use, operational sites such as mines and other facilities are expected to be decommissioned or closed by the undertaking in an orderly way. Closure and rehabilitation can include:
- (a) Stabilisation of open-pit or underground workings, such as landfilling to prevent subsidence;
  - (b) Removal or conversion of infrastructure;
  - (c) Rehabilitation of waste rock stockpiles and tailings facilities to control erosion and land degradation;
  - (d) Management of waste, surface water and groundwater quality issues resulting from abandoned mine drainage, waste rock and leaching's from tailings; and
  - (e) Post-closure environmental and socio-economic monitoring.
- AR 64. The operational life of operational sites may last for several decades a regularly updated restoration plan is essential. For this reason, the undertaking may update its closure and restoration plan annually and such disclosure may be disclosed by the undertaking.
- AR 65. The undertaking may include how practices apply to business partners, such as contractors, sub-contractors, suppliers, and joint venture partners. Where practices do not apply to business partners, the undertaking may discuss factors that prevent the application of such practices.

***Application Requirement related to [draft] ESRS S3-3 Processes to remediate negative impacts and channels for affected communities to raise concerns – Closure and post closure***

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- AR 66. When disclosing its processes to remediate negative impacts following [draft] ESRS S3-3, the undertaking shall consider how it engages with local communities and other relevant stakeholders on its closure and post-closure planning and implementation, including post-mining land-use, to limit the actual and potential adverse impacts (e.g. unemployment, people moving out affecting the liveability of remaining supporting activities such as local shops, schools).

***Application Requirement related to [draft] ESRS G1-2 Management of relationships with suppliers***

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- AR 67. "Suppliers local" to an operation are undertakings operating and registered in the same geographic market as the operation. The undertaking shall consider "local" to be the specific country market where its operation is located, but it may include the community surrounding operations, a region within a country, or a country. The undertaking shall report any deviations from the suggested definition of "local".
- AR 68. When providing information about its policy the undertaking may include details on how suppliers are categorised. Such categorisation may be based on:
- (a) geographic location, such as proximity to the site;
  - (b) level of ownership and/or employment by local individuals or particular groups such as indigenous or vulnerable people; or
  - (c) the extent of value added.

## 2. Application Requirements related to sector-specific Disclosure Requirements

### ***Application Requirement MIN 1 – List of operational sites***

AR 69. When disclosing on MIN 1 the undertaking may use a table to list the operational sites. See example:

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D etc.</b>
<b>Mines and surface areas</b>				
<b>Quarries</b>				
<b>Tailings dams</b>				
<b>Infrastructure</b>				
<b>Active /closure &amp; rehabilitation plans / closure activities / closed / rehabilitated</b>				
<b>Social matters (i.e. local community, indigenous communities, land rights etc.)</b>				
<b>Environmental matters (i.e. located in or near key biodiversity areas, pollution, toxic waste, acid, methane, etc.)</b>				

AR 70. When defining what 'near' or 'local' means for a specific site, the undertaking shall consider:

- (a) Stakeholders;
- (b) Geographical location;
- (c) Positive and negative social or environmental impacts;
- (d) Labour market.

### ***Application Requirement MIN 2 – Proved and probable reserves***

AR 71. The undertaking shall consider following the Pan European Reserves and Resources Reporting Committee (PERC) Standard for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (the 'PERC Reporting Standard') or the Combined Reserves International Reporting Standards Committee (CRIRSCO) guidance for classifying ore reserves and mineral resources, including the use of a "competent person" to compile information.

AR 72. The undertaking shall consider disclosing the percentage and grade (in percentage metal content) of proved reserves.

AR 73. The undertaking may report probable mineral reserves, as well as their breakdowns per paragraphs [90, risk areas] and [91, mineral].

AR 74. The undertaking shall consider disclosing the process of identifying the high-risk areas in a way that is easy to understand and replicate.

- (a) in or near areas of conflict
  - i. Reserves shall be considered to be in or near an area of active conflict if they are located in the same country as the active conflict;
  - ii. If the undertaking can demonstrate that a conflict is contained to a region, state, or designated area that is not proximate to its reserves, then it may exclude these from the scope of disclosure. If reserves are located in a country, region, or state adjacent to an active conflict and/ or can be reasonably expected to be operationally impacted by the conflict, then these reserves shall be included in the scope of disclosure.
- (b) in or near indigenous land

- i. Indigenous lands are considered those occupied by indigenous people which are defined in ESRS S3 as: "indigenous peoples are generally identified as 1) tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; 2) peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

AR 75. The undertaking may separately identify reserves in areas with additional ecological, biodiversity, or conservation designations, such as those listed by the A-Z Guide of Areas of Biodiversity Importance prepared by the United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC).

AR 76. The undertaking may disclose reserves that are in protected areas or endangered species habitat, but present low risk to biodiversity or ecosystem services; the undertaking may provide similar discussion for reserves located in areas with no official designation of high biodiversity value but that present high biodiversity or ecosystem services risks.

### ***Environmental related requirements***

#### ***Application Requirement MIN 4-E2 - Tailings facilities and impoundments***

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AR 77. The undertaking may consider appointing a third party to assess the hazard potential. The three different hazard potential classifications are:

- (a) High hazard potential;
- (b) Significant hazard potential;
- (c) Low hazard potential.

AR 78. High hazard potential impoundments are dams, regardless of their condition or size, whose failure will probably cause loss of life. These facilities are generally located in populated areas or where dwellings are found in the flood plain, and failure can reasonably be expected to cause loss of life, serious damage to homes, industrial and commercial buildings, and damage to important utilities, highways, or railroads.

AR 79. Significant hazard potential impoundments are dams, regardless of their condition or size, whose failure would result in no probable loss of life but would disrupt important utilities or cause significant economic loss or significant environmental damage. These facilities are generally located in predominantly rural areas, but could be in populated areas with significant infrastructure, where failure could damage isolated homes, main highways, and minor railroads, or disrupt the use of service of public utilities.

AR 80. Low hazard potential impoundments are dams whose failure would not be expected to cause loss of life, disrupt important utilities, or cause significant economic loss or significant environmental damage. These facilities are usually located in rural or agricultural areas where losses are limited principally to the owner's property or where failure would cause only slight damage to farm buildings, forest and agricultural land, and minor roads.

AR 81. The scope of this disclosure includes only dams that either: (1) Equal or exceed 7.5 meters in height and can or do store a volume of more than 18.500 cubic meters, or (2) Exceed 1.8 meter in height and can or do store 61.500 or more cubic meters.

AR 82. Hazard potential classification depends solely on the consequences of failure of the dam and not on the condition of the dam. Hazard potential classification can change over time.

AR 83. Relative to paragraph 101, the amount of tailing waste produced to be reported as follows:

- (a) the amount of total tailings waste shall be calculated in metric tons;

- (b) the scope includes tailings waste generated from mining activities; and
- (c) the scope of the disclosure excludes waste rock and overburden.

AR 84. When reporting on the standard or code of practice used for safe management of tailings facilities, the undertaking may refer to the Global Industry Standard on Tailings Management (GISTM).

### ***Social related requirements***

#### ***126 Application Requirement MIN 8-S3 – Security personnel***

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- AR 85. The undertaking shall consider the content of the trainings offered (e.g. differentiate between training related to security issues and training on human rights policies) and also if it addresses the protection of vulnerable and marginalised groups, especially women, children and indigenous populations.
- AR 86. The undertaking may disclose information on its processes of tendering and contracting with security providers. It may also disclose whether requirements related to the undertaking's human rights policies are included in private security contracts.

#### ***Application Requirement MIN 10-S3 – Human rights and environmental defenders***

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- AR 87. When describing the procedures and management of public or private security providers, the undertaking shall refer to training provided on company policies or international standards focused on safeguarding human rights as well as guidelines on the use of physical force and reporting procedures. It may also refer to screening and assessment processes, cost reimbursement and the use of company facilities.
- AR 88. When calculating the number of incidents in paragraph 124 126, the undertaking shall consider official sources such as policy reports or other reports issued by governmental organisations. The undertaking shall not consider unofficial sources e.g. social media when preparing this disclosure.

#### ***Application Requirement MIN 12-S3 – Workforce hired from local communities***

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- AR 89. Workers hired from local communities include those individuals either born or who have the legal right to reside indefinitely (such as naturalized citizens or permanent visa holders) in the same geographic market as the operation.
- AR 90. The geographical definition of 'local' can include the community surrounding operations, a region within a country, or a country. The undertaking shall consider its definition of local when preparing this disclosure and disclose it.

### ***Governance related requirements***

#### ***Application Requirement MIN 14-G1 – State aid and competition law***

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- AR 91. When reporting in accordance with paragraph 137, the undertaking may include a breakdown of payments to governments split by the following revenue streams, if applicable:
- (a) The host government's production entitlement;
  - (b) National state-owned company production;
  - (c) Royalties;
  - (d) Dividends;
  - (e) Bonuses (e.g., signature, discovery, and production bonuses);
  - (f) License fees, rental fees, entry fees; and other considerations for licenses or concessions; and
  - (g) Any other significant payments and material benefits to government.

## Appendix C: List of datapoints in accordance with EU law

This Appendix is an integral part of the [draft] ESRS *Mining, Quarrying and Coal* and has the same authority as the main body of the [draft] Standard:

The table below illustrates the datapoints that emanate from other EU legislation. These are to be reported irrespective of the outcome of the materiality assessment.

Disclosure Requirement and related datapoint	Pillar 3 reference
DR related to ESRS 2-SBM 1 Market position, strategy, business model(s) and value chain, paragraph 2222	Article 449a Capital Requirements Regulation – CRR – Template 1: Banking book – Climate change transition risk: Credit quality of exposures by sector, emissions and residual maturity
DR MIN 1 – List of operational sites, paragraph 35 85(f)i	Article 449a CRR – Template 1: Banking book – Climate change physical risk – Exposures subject to physical risk
DR related to ESRS E1-6 – Gross scopes 1, 2, 3 and total GHG emissions, paragraph 36	Article 449a CRR – Template 1: Banking book – Climate change transition risk: Credit quality of exposures by sector, emissions and residual maturity
DR related to ESRS E1-6 – Gross scopes 1, 2, 3 and total GHG emissions, paragraph 85(f)i	Article 449a CRR – Template 3 – Banking book – Climate change transition risk – Alignment risks

## Appendix D: NACE Codes Mining, Quarrying and Coal

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This Appendix set the list of NACE codes that are covered by this [draft] sector ESRS. All undertakings for which one or more of these NACE codes represent a significant sector according to paragraphs 28 (a) and (b) of ESRS 2, shall report according to this [draft] sector ESRS.

Appendix E is an integral part of the [draft] sector ESRS and has the same authority as the other parts of the [draft] ESRS *Mining, Quarrying and Coal*.

<b>B.05.10</b>	Mining of hard coal
<b>B.05.20</b>	Mining of lignite
<b>B.07.10</b>	Mining of iron ores
<b>B.07.21</b>	Mining of uranium and thorium ores
<b>B.07.29</b>	Mining of other non-ferrous metal ores
<b>B.08.11</b>	Quarrying of ornamental and building stone, limestone, gypsum, chalk and slate
<b>B.08.12</b>	Operation of gravel and sand pits
<b>B.08.91</b>	Mining of chemical and fertiliser minerals
<b>B.08.92</b>	Extraction of peat
<b>B.08.93</b>	Extraction of salt
<b>B.08.99</b>	Other mining and quarrying n.e.c.
<b>B.09.90</b>	Support activities for other mining and quarrying
<b>C.19.10</b>	Manufacture of coke oven products

## **Appendix E: Material Sustainability Matters in the Mining, Quarrying and Coal sector**

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This Appendix presents a description of the sustainability matters that are material for undertakings in the Mining, Quarrying and Coal sector. For the sustainability matters that are also listed in paragraph AR12 of Appendix B of [draft] ESRS 1, the description in this Appendix provides a description of how such matters materialise in this specific sector.

This Appendix is provided for illustrative purposes and is non-authoritative.

### **Descriptions of material sustainability matters**

#### **E1: Climate change adaptation**

##### *Mining and quarrying*

Mining and metals production is often energy-intensive, with a significant proportion of energy consumption in the sector accounted for by purchased electricity. While fuel combustion on-site contributes to the sector's direct (Scope 1) GHG emissions, electricity purchases from the grid can result in indirect, Scope 2 emissions. The energy intensity of operations may increase with decreasing grades of deposits and increasing depth and scale of mining operations. The choice between on-site versus grid-sourced electricity, and use of alternative energy, can play an important role in influencing both the costs and reliability of energy supply. Affordable and easily accessible energy is an important competitive factor in a commodity market driven by global competition and purchased fuels and electricity can account for a significant proportion of total production costs. The way in which an undertaking manages its overall energy efficiency and intensity, its reliance on different types of energy, and its ability to access alternative sources of energy, can therefore be a material factor.

##### *Coal*

Coal operations generate significant amounts of CO<sub>2</sub> emissions and have the highest intensity per energy unit out of all fossil fuels. This topic covers how a undertaking in this sector adapts to risks derived from climate change and its contributions to society to handle these impacts. Due to the high intensity of CO<sub>2</sub> emissions, this topic sheds a light on the transition the undertaking is undergoing towards becoming low carbon. This would include the different alternatives they may have to contemplate to reduce emissions while developing coal activities and what effect these changes may have on the undertaking's employees and the communities in which coal activities take place.

#### **E1: Energy**

##### *Mining, quarrying and coal*

Mining operations are energy-intensive and generate significant direct greenhouse gas (GHG) or CO<sub>2</sub>e emissions, including carbon dioxide from fuel use during mining, ore processing, and smelting activities. For coal operations the release of GHG emissions includes carbon dioxide from fuel use and methane released from coal beds during mining and post-mining activities.

Energy-intense production has implications for climate change, and electricity purchases from the grid can create indirect Scope 2 emissions. Emission intensity will also depend on the method used, open pit or underground mining, excavation type, depth of the mine and volumes of fugitive methane released. Underground mining is found to result in more GHG or CO<sub>2</sub>e emissions. The extent and type of GHG emissions can vary depending on the metal mined and processed.

Regulatory efforts to reduce GHG emissions in response to the risks posed by climate change may result in additional regulatory compliance costs and risks for metals and mining undertakings due to climate change mitigation policies. Operational efficiencies can be achieved through the cost-effective reduction of GHG emissions. Such efficiencies can mitigate the potential financial impact of increased fuel costs from regulations that seek to limit-or put a price on-GHG emissions.

Similar to Mining, quarrying also requires a significant quantity of energy, sourced primarily from direct combustion of fossil fuels as well as from purchased electricity. Quarries also use alternative fuels for their kilns, such as scrap tires and waste oil—often waste generated by other industries. If properly managed, these can lower energy costs and greenhouse gas (GHG) emissions. However, there could be potentially negative impacts, such as releases of harmful air pollutants that undertakings need to minimize in order to obtain net benefits from using such fuels. Decisions about use of alternative fuels, renewable energy, and on-site generation of electricity (versus purchases from the grid) can play an important role in influencing both the costs and reliability of energy supply. Affordable, easily accessible, and reliable energy is an important competitive factor in this industry, with purchased fuels and electricity accounting for a significant proportion of total production costs. The way in which a quarry manages its overall energy efficiency, its reliance on different types of energy and associated sustainability risks, and its ability to access alternative sources of energy can influence its profitability.

## **E2: Pollution of Air**

### *Mining and quarrying*

Non-greenhouse gas (GHG) air emissions in this sector include hazardous air pollutants, criteria air pollutants, and Volatile Organic Compounds (VOCs) from smelting and refining activities. These can have significant, localized human health and environmental impacts. Depending on the metal, uncaptured sulphur dioxide, lead, mercury, cadmium, and arsenic are among the chief pollutants, along with particulate matter. Depending on the type of mining, i.e. open pit mining or underground mining the pollution of air differs. Underground mining is found to result in more GHG emissions than open pit mining.

Financial impacts resulting from air emissions will vary depending on the specific location of operations and the applicable air emissions regulations. Active management of the issue—through technological and process improvements—could allow undertakings to limit the impacts of increasingly stringent air quality regulations globally. Undertakings could also benefit from operational efficiencies that could lead to a lower cost structure over time.

On-site in fuel combustion and production processes in the quarrying sector emit air pollutants and hazardous chemicals, including, small quantities of organic compounds and heavy metals. Emissions of particular concern include nitrogen oxides, sulphur dioxides, particulate matter, heavy metals (e.g., mercury), lead, cadmium, dioxins, and volatile organic compounds, among others. In addition, the quarrying sector is one of the biggest users of dynamite to blast rock aiding the excavation, resulting in dust particles being spread in the air. These air emissions can have significant, localised human health and environmental impacts.

### *Coal*

Coal operations have an impact on the quality of air. Coal operations are emission intensive. Coal operations result in the emission of different gases during the entire operational process, from the drilling, refining, and transporting, to the transportation and waste management. This topic covers the emissions of Sulphur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), particulate matter (PM), heavy metals, persistent organic pollutants (POPs), volatile organic compounds (VOCs), ozone depleting substances (ODS), ammonia (NH<sub>3</sub>), and other (hazardous) chemicals regulated by REACH and CLP and their compounds, several types of dust particles as well as other physical pollutants. These emissions are particular to the coal operations. This topic would additionally cover the efforts from undertakings to reduce the emissions of the above-mentioned gases and the impact these have on ecosystems, the health and safety of employees and local communities, as well as the economic and social effect these may have on society.

## **E2: Pollution of Water**

### *Mining, quarrying and coal*

Mining, quarrying and coal operations can impact both the availability and the quality of local water resources. Quarrying requires substantial volumes of water for the production process and also coal operations are water intensive.

For quarries, the use and spill of nitro-glycerine also may affect ground water or water basins as well as the animals living in it. For coal operations, the use of water in coal washing to remove sulphur, in cooling drilling equipment, and in transporting coal in slurry pipelines can impact resources.

Mining, quarrying and coal undertakings face operational, regulatory, and reputational risks due to water scarcity, costs of water acquisition, regulations on effluents or amount of water used, and competition with local communities and other sectors for limited water resources. Wastewater treatment and discharge is often regulated by national or local agencies. For coal undertakings, violating limits on selenium, sulphate, and dissolved solids could affect coal operations undertakings through significant penalties, compliance costs, delays in production, or higher costs related to mine closure

Impacts associated with water management may include higher costs, liabilities, and lost revenues due to curtailment or suspension of operations. The severity of these risks can vary depending on the region's water availability and the regulatory environment. Undertakings that are unable to secure a stable water supply could face production disruptions, while rising water prices could directly increase production costs. Consequently, the adoption of technologies and processes that reduce water consumption could lower operating risks and costs for undertakings by minimizing the impact of regulations, water supply shortages, and community-related disruptions on the operations of the undertaking. Undertakings in the sector may deploy new technologies to manage risks related to water risk, including desalination, water recirculation, and innovative waste-disposal solutions. Reducing water use and contamination can create operational efficiencies for undertakings and lower their operating costs.

## **E2: Pollution of Soil**

### *Mining, quarrying and coal*

Mining, quarrying and coal activities are one of the most important anthropic causes of soil degradation and pollution in the world, according to scientific research. Mine soils in post-mining locations have great spatial variability in their properties (e.g., pH, particle size distributions, PTEs content), and are largely dependent on the characteristics of the ore that was processed and on the materials which were deposited at the site and can persist over time. Violating limits of pollutants allowed could affect operations of the undertakings through significant penalties, compliance costs, delays in production, or higher costs related to mine closure. Soil can retain pollution for a very long time while slowly passing on the contamination to groundwater, surface water and air.

## **E2: Substances of concern**

### *Mining, coal*

Mining and coal operations can have extensive impact on the environment. For this reason, undertakings shall disclose and take into account multiple factors when designing a mine. These factors shall include whether the mine could be designed to be underground rather than open-pit, what happens after its life, the productivity of it and the time of year it is productive. Further to this, in mining processes certain substances are used that can have an impact on the environment and human health.

This covers impacts from carcinogenic, mutagenic or reprotoxic substances (CMRs), persistent, bioaccumulative and toxic substances (PBTs); very persistent and very bioaccumulative substances (vPvBs); endocrine disrupting substances (EDs); immunotoxicants; neurotoxicants, respiratory sensitisers; substances having specific organ toxicity (STOT) with chronic effects; persistent, mobile

and toxic substances (PMTs) and very persistent and very mobile substances (vPvMs); as well as other substances having a chronic effect on human health or the environment (emphasizing on mercury) and substances hampering recycling for safe and high quality secondary raw materials. Undertakings face the risk that regulation may restrict or ban the use of particular chemicals such as through the REACH and EQSD requirements.

Mercury release during coal burning operations can have a detrimental effect mainly on marine ecosystems, thus on human health. The production of synthetic graphite can be obtained from coal char, which could be a substitute material of graphite.

The coal industry presents several hazards which undertakings must prevent and address. Some examples include ground or strata failure, fires or (methane) explosions, inundation or inrush of any substance, and others. It is therefore critical that risk management plans are put in place, along with related remedial actions for workers, communities, and the environment. Appropriate tailings management plays an important role in minimising the risk for industrial hazards occurring. Underground mining can suffer from dust explosions, inundation, mining corridor collapses or others. Open pit mining can suffer from landslides, water inbursts, machinery failures and others. Other causes for industrial hazards relate to tailings management. Failures can result from inadequate water management, overtopping, foundation or drainage failure, erosion, and earthquakes.

## **E2: Industrial hazards**

The mining and coal industry presents several hazards which undertakings must prevent and address. Some examples include: ground or strata failure, fires or explosions, inundation or inrush of any substance (including from mine tailings dam failures), and others. Underground mining can suffer from dust explosions, inundation, mining corridor collapses or others. Open pit mining can suffer from landslides, water inbursts, machinery failures and others. Other causes for industrial hazards relate to tailings management. Failures can result from inadequate water management, overtopping, foundation or drainage failure, erosion, and earthquakes. It is therefore critical that risk management plans are put in place (amongst others for tailing dams, to avoid ruptures or spill overs), along with related remedial actions for workers, communities and the environment. Appropriate tailings management plays an important role in minimising the risk for industrial hazards occurring.

## **E2: Pollution of living organisms and food resources**

Common coal, mining and mineral processing activities that contribute to noise pollution include overburden removal, drilling and blasting, excavating, crushing, loading and unloading, vehicular traffic, and the use of generators. Noise generated by mining operations is often of higher intensity than natural noise, and mining operations can occur throughout the night. Noise pollution can have a direct and lasting impact on workers, nearby communities and biodiversity.

## **E3: Water use**

### *Mining, quarrying and coal*

Mining operations, depending on their geographical and geological location, must manage water consumption, flood risks, water quality and other issues. Environmental factors and climate contribute to the complexity of developing a mine water management system in many cases used to heat water to create a steam and generate electricity. In dry climates, an undertaking may need to focus more on conservation, collecting, storing, and reusing contact water from the tailing's storage facility, seepage, open pit, and/or underground mine. For wet climates the greatest challenge is rather managing flood events and eliminating the risks of spilling, erosion, and infrastructure failure. Undertakings in cold climate regions must consider the large quantity of water generated from snow melt and ice thaw and manage the impacts of permafrost on drainage facilities. Each mine site requires a tailored and holistic solution. Risks related to water use and management are also linked to the social license to operate and wider community well-being, ensuring availability and good quality of water to nearby communities. Water abstraction is in many areas only possible through obtaining the necessary permits.

### **E3: Habitat degradation and intensity of pressure on marine resources**

Mining and coal activities produces large volumes of waste, formed by the non-processed rock from overburden or access tunnels and shafts, and by the processed tailings. Traditionally, tailings are stored in land dams, but the lack of land availability, potential risk of dam failure, geological instability, and topography in coastal areas in certain countries makes consideration of disposal of tailings into marine systems, a process usually known as Deep-Sea Tailings Disposal. DSTD can have lasting impacts on biodiversity, ocean ecosystems as well as on fishing communities.

Other impacts that mining can have is around waste disposal in coastal ecosystems, which must be carefully managed. Finally, some undertakings are currently exploring deep-sea bed mining however it is worth noting that no agreement by the International Seabed authority has yet been reached on this, and whether it is deemed a safe practice.

### **E4: Impacts on the extent and condition of ecosystems**

The development, operation, closure, and remediation of mines can have a range of impacts on biodiversity, such as alterations of landscape, vegetation removal, and impacts to wildlife habitats. Acid rock drainage is a particularly significant risk: it is highly acidic water, rich in heavy metals, formed when surface and shallow subsurface water come into contact with mining overburden. Acid mine drainage can have harmful effects on humans, animals, and plants. Similarly tailings management will play an important role. Biodiversity impacts of mining operations can affect the valuation of reserves and create operational risks. The environmental characteristics of the land where reserves are located could increase extraction costs due to increasing interest in the protection of ecosystems. Undertakings could also face regulatory or reputational barriers to accessing reserves in ecologically sensitive areas. This may include new protection status afforded to areas where reserves are located. Mining undertakings face regulatory risks related to reclamation after a mine is decommissioned, per applicable regulatory requirements to restore mined property according to a prior, approved reclamation plan. Material costs may arise from removing or covering refuse piles, meeting water treatment obligations, and dismantling infrastructure at the end of life. Furthermore, ongoing mining operations are subject to laws protecting endangered species. Undertakings that have an effective environmental management plan for different stages of the project lifecycle may minimize their compliance costs and legal liabilities, face less resistance in developing new mines, and avoid difficulties in obtaining permits, accessing reserves, and facing delays in project completion.

Quarries are often operated close to processing facilities. Quarrying requires the removal of vegetation and topsoil. It also requires the blasting and crushing of underlying stone deposits. The process can lead to permanent alterations of the landscape, with associated impacts on biodiversity. The environmental characteristics of the land where quarrying takes place could increase extraction costs, due to increasing awareness and protection of ecosystems. The use and spill of nitro-glycerine also may affect ground water or water basins as well as the animals living in it. Undertakings could also face regulatory or reputational barriers to accessing sites in ecologically sensitive areas. This may include new protection status afforded to areas where reserves are located. Ongoing quarrying operations may also be subject to laws protecting endangered species. Undertakings that have an effective environmental management plan for different stages of the project lifecycle—including restoration during site decommissioning—could minimize their compliance costs and legal liabilities. These undertakings could face less community resistance in quarrying at new sites and avoid difficulties in obtaining permits and delays in project completion.

### **E4: Direct impact drivers of biodiversity loss**

#### *Mining, quarrying and coal*

Mining, quarrying and coal operations make substantial impacts on the earth and nature around them. Surface mining and mountaintop removal can alter the landscape, removing vegetation and wildlife habitats. Acid mine drainage is particularly significant: it is highly acidic water, rich in heavy metals, formed when surface and shallow subsurface water comes into contact with mining overburden, and

can have harmful effects on humans, animals, and plants. Similarly tailings management will play an important role. Biodiversity impacts of coal operations can affect the valuation of reserves and create operational risks. The environmental characteristics of the land where reserves are located could increase extraction costs as a result of increasing awareness and protection of ecosystems. undertakings could also face regulatory or reputational barriers to accessing reserves in ecologically sensitive areas, such as the designation of areas where reserves are located as protected areas.

Undertakings face regulatory risks related to reclamation after a mine is decommissioned, per applicable regulatory requirements to restore mined property according to a prior, approved reclamation plan. Material costs may arise from removing or covering refuse piles, fulfilling water treatment obligations, and dismantling infrastructure at the end of life. Furthermore, ongoing operations are subject to laws protecting endangered species. Undertakings that have an effective environmental management plan for different stages of the project lifecycle may minimise their compliance costs and legal liabilities, face less resistance in developing new mines, avert delays in project completion, and avoid difficulties in obtaining permits and accessing reserves.

## **E5: Resources inflows, including resource use**

### *Mining and quarrying*

Mining and quarrying operators are increasingly supporting applications and facilitating efforts towards recovery and re-use of minerals. This includes choices made by product designers and engineers (e.g., material and process technology selection) which can ultimately have significant influence on a product's overall environmental impact. Resource productivity, conserving energy and water (in particular reducing their water footprint), and preventing environmental health and safety risks improves the financial performance of mining operations and helps secure their continued license to operate.

### *Coal*

Estimates suggest that coal undertakings may be unable to extract a significant proportion of their coal reserves if greenhouse gas (GHG) emissions are to be controlled to limit global temperature increases to two degrees Celsius per the Paris Agreement. Stewardship of capital resources while taking into account medium-to long-term trends, particularly related to climate change mitigation actions, is critical in order to prevent asset impairment and maintain profitability and creditworthiness. Globally, regulations and policies are and may continue to be put into place to limit GHG emissions from coal-fired power plants - the customers of coal undertakings - thus lowering the demand for, and subsequently the prices of, coal. Coal demand is also being affected by regulations governing other harmful air emissions that apply to coal-fired power plants. An expansion of GHG-mitigation regulations may increase the magnitude of potential financial impacts in the medium to long term. Along with improved competitiveness of alternative energy technologies, this poses a long-term risk for the reserves and capital expenditures of coal operations undertakings.

## **E5: Waste**

### *Mining and quarrying*

The Mining sector generates large volumes of mineral processing and smelting wastes, including slags and tailings, some of which may be hazardous or chemically reactive. Impoundments for tailings can cover large areas of land. This can present a significant threat if the impoundments burst, collapse, or leak, leading to the loss of life or damage to property and ecosystems. Mineral waste is also often stored in-pit, using abandoned open pit surface mines. Such storage can create the potential for groundwater contamination instead of the risk of surface water contamination associated with open-pit waste heaps.. Some mining activities can take place in coastal or deep-sea ecosystems, which can result in pollution of marine ecosystems if the waste processing is not accordingly managed. Undertakings that reduce and recycle waste streams while implementing policies to manage risks related to the integrity of tailings facilities may enjoy lower regulatory and litigation risks, remediation liabilities, and costs. Additionally, tailings can contain hazardous chemical residues from extraction and processing operations.

Undertakings' ability to manage the sourcing, transport, use, and disposal of mineral processing waste and by-products can reduce associated risks.

Recycling rates in quarrying are high. However, wastes from production processes, pollution control devices, and from hazardous waste management activities present a regulatory risk and can raise operating costs. Cement kiln dust (CKD)—consisting of fine-grained, solid, highly alkaline waste removed from cement kiln exhaust gas by air pollution control devices—is the most significant waste category in the industry. Regulatory risk remains from evolving environmental laws, including those at local and national levels and for other waste streams. Undertakings that reduce waste streams—hazardous waste streams in particular—and recycle by-products, can therefore lower regulatory and litigation risks and costs.

### *Coal*

Handling of solid rock and clay waste, process refuse, and liquid coal waste containing hazardous substances like mercury, arsenic, and cadmium poses operational and regulatory challenges for coal operations undertakings. Coal slurry or tailings ponds can present a significant threat if the impoundments burst, collapse, or leak, leading to destruction of lives, property, and ecosystems, with associated financial impacts that may include regulatory penalties, compensation payments, and remediation or compliance obligations. Permitting of coal mining operations may be affected, lowering an undertaking's revenue or requiring additional expenditures prior to approval. Undertakings' ability to lower the number and size of tailings ponds and ensure the structural integrity of impoundments can help minimize such impacts.

## **E5: Product innovation**

Innovations in building materials are a key component in the growth of quarries. Consumer and regulatory trends are largely driving adoption of sustainable building materials and processes that are more resource efficient and can reduce health impacts of buildings throughout their lifecycle. This is creating new business drivers for quarries, with an opportunity to increase revenues. Furthermore, some new products require less energy to produce, or use largely recycled inputs, reducing production costs. Sustainable construction materials, therefore, can contribute to a undertaking's long-term growth and competitiveness.

## **S1/S2: Working time and work-life balance**

Mining, quarrying and coal operations are typically operated in a manner that involves irregular working hours for a large portion of their own workforces. Mines and coal operations are frequently operated around-the-clock, including on weekends. Shift work longer than eight hours, and evening, night and weekend work are typical for many workers in this sector. Furthermore, mining and coal operations located far away from populated areas ("remote locations") often resort to arrangements whereby workers will rotate between long multi-day or multi-week periods on site and periods with time off off-site ("fly-in fly-out" arrangements). In such remote locations adequate housing, access to water and sanitation and health care are often material matters.

Research has demonstrated an association between extensive irregular working hours and time without family, recreation, and leisure and negative impacts on physical and psychological health and work-life balance. Extensive use of irregular working hours may make it difficult for undertakings to retain their workers and recruit new workers.

## **S1/S2: Health and safety**

Many of mining, quarrying and coal operations are both strenuous and dangerous and are associated with high degree of risk on a number of health and safety matters. Injuries may be caused by accidents with heavy equipment or explosives, or collapse of mines or other facilities. Workers' health may be impaired by prolonged exposure to dust, heat, vibration, noise, ultraviolet light, heavy lifting and

repetitive movements, and hazardous chemicals. This sector has higher than average rates of fatalities, injuries, lost work days and occupational diseases. Worker injuries, illnesses, and fatalities can lead to regulatory penalties, negative publicity, low worker morale and productivity, and increased healthcare and compensation costs.

This sustainability matter covers the undertakings policies regarding health and safety, critical incident risk management, as well as workforce health, wellbeing, and safety. Moreover, considering the recent covid-19 pandemic, the sustainability matter also covers pandemic preparedness and the undertaking's response within its value chain.

### **S1/S2 : Adequate wages and secure employment**

Many undertakings in the mining, coal and quarry sector make extensive use of non-employee workers, typically referred to as 'contractors' - that is, self-employed workers contracting directly with the undertaking or supplied by employment agencies. Many of these workers are utilized for extended periods of time for regular operations, and perform work which is the same or similar to the work that employees do. However, these workers lack the employment security and, frequently, the wages and benefits that employees receive. Research also shows that the risk of injury and health impairment may be higher for non-employee workers than for employees. Secure employment is also particularly material for the mining industry as non-employee workers may have fewer rights to unemployment and early retirement benefits and access to retraining than employees when it comes to the closure of mine sites, which can lead to mass unemployment for the local community.

Another factor contributing to the materiality of these matters is the extensive contracting-out of the operation of mining, quarrying and coal operations. Contracting-out rather than owner-operator arrangements are particularly frequent in the case of smaller owners ('junior miners'), who may have little or no experience in operating a mine. Contracting-out arrangements have relevance for the security of employment, since such arrangements typically are medium term (e.g. five years) and obligations to the contractors' workforce as a rule do not extend beyond the end of the contract.

These are also material issues in the mining sector given the amount of artisanal and small-scale mining within the industry who, due to their small scale, don't have the governance structure and protection in place to ensure their worker's rights

### **S1/S2: Freedom of association and collective bargaining**

The mining, coal and quarrying sector in many countries has a higher rate of trade union representation and collective bargaining coverage than the economy-wide national average. However, freedom of association may be at risk, particularly in locations where these are not guaranteed by national legislation and/or where enforcement is weak. Many mining and coal operations are located in countries where the rule of law has broken down (ten of the 148 countries rated in the 2022 ITUC Rights Index), where labour rights are not guaranteed (34 countries) or where there are systematic violations of labour rights (39 countries). The proportion of self-employed workers ('contractors') whose working conditions are determined by a collective bargaining agreement (the 'collective bargaining coverage rate') is typically lower than that of employees.

### **S1: Training and skills development**

Training and skills development are particularly significant in the mining, coal and quarrying along a number of dimensions. Mining and coal operations can be both technically difficult and dangerous and it is therefore imperative that the workers are properly trained and have the skills and capabilities to handle the risks that working in the mine entails. Health and safety-related training, including the proper operation of equipment and handling of explosives and hazardous chemicals, is key to reduce the risk of accidents and occupational diseases.

Some mining, coal and quarrying operations are placed in the middle or close to active conflict areas. They may also be the subject of controversy which leads to the necessity of security personal. Thus, this sustainability matter also includes training of security personal in human rights and humanitarian law.

### **S1: Measures against violence and harassment in the workplace**

Research shows that sexual harassment at the workplace occurs more frequently in mining, coal and quarrying than on average. Thus in the industry there is a higher risk for sexual harassment and other gender-related violence in the workplace. Explanations typically refer to the male domination of the industry, and to the social milieu of housing camps in remote locations.

Negative publicity on this issue can have a negative impact on the reputation of specific undertakings as well as on the industry as a whole, and can make it more difficult to retain existing and recruit new female workers.

Measures against violence and harassment at the workplace include clear policies on these issues, workforce training and an effective grievance procedure.

### **S1: Diversity, including gender equality and equal pay for work of equal value**

The mining, coal and quarrying industry has been identified as one of the most highly male-dominated industries, with few women in the workforce of most undertakings in this sector and an above-average male-female wage gaps. Research reports that many female workers in the industry feel that they do not receive the same level of support and have the same career chances as their male colleagues.

One impact of this situation is that many female workers will be earning less money and not realizing their full career potential. Another possible impact is on local communities, particularly where the undertaking is the main employer, as fewer women will benefit from income and career chances. It also may contribute to the difficulties to recruit enough workers which are reported, as women (who make up half of the labour force) may be reluctant to work in the sector.

Racism, which results in demotivated workers and a negative workplace culture, has also been reported to be an issue in the industry, with many of the same impacts on minorities that gender discrimination has on women. Ensuring workforce inclusion, diversity, and that women and other minorities have equal opportunities is therefore an important aspect of sustainability within the mining industry. Such measures include clearly communicated policies, effective grievance and remediation procedures, clear criteria and procedures for remuneration and promotion, mentoring and other forms of support.

### **S1/S2: Child labour**

The ILO estimates that one million children are working in mining and quarries. The use of child labour is most prevalent in countries where labour rights are weak and/or poorly enforced and in artisanal and small-scale mining suppliers.

In addition to the negative impact child labour can have on the health, development and well-being of children, there is reputational risk for undertakings using child labour in own operations or in the supply chain.

This sustainability matter therefore includes the undertaking's efforts to tackle these risks, the organization's supply chain management and whether it ensures that it is ethical, sustainable, and ensures protection of all their suppliers' rights. The OECD has issued sector-specific guidelines on due diligence in mining, and the ILO has developed recommendations for action plans to address child labour in this sector.

### **S1/S2: Forced labour**

The ILO estimates that roughly a quarter million adults are subject to forced labour in mining, as well as a significant proportion of the one million children working in the sector. As in the case of child labour, forced labour is concentrated in certain countries where labour rights are weak and in artisanal and small-scale mining suppliers.

In addition to the negative impacts child labour can have on the health, development and well-being of children, there is reputational risk for undertakings using child labour in own operations or in the supply chain.

This sustainability matter therefore includes the undertaking's efforts to tackle these risks, the organization's supply chain management and whether it ensures that it is ethical, sustainable, and ensures protection of all their suppliers' rights. The ILO, OECD, IOM and UNICEF have jointly issued recommendations for ending child labour, forced labour and human trafficking in global supply chains.

### **S1/S2: Adequate housing, including water and sanitation (Mining and coal only)**

The quality of housing includes not only the physical condition of the housing structure but also the physical and social environment in which the housing is located. Adequate housing, including water and sanitation, is a material issue where mining, quarrying and coal operations are located in remote areas or in communities lacking the housing and other infrastructure needed to fully support the workforce. In the extreme case of remote locations, infrastructure is completely lacking and workers may be flown in for weeks at a time. In such situations undertakings need to provide housing. Housing currently provided by undertakings ranges from temporary camps to dormitories to homes. In these situations, the quality of this housing and the suitability of this housing for families, is a material issue.

Policies, targets and action plans on this matter focus on the quality of housing that is provided to workers. Basic measures of housing quality used in the EU include access to water and sanitation, adequacy of heating, the absence of a leaking roof, and adequate space (i.e. lack of overcrowding). If such housing is not provided for free by the undertaking, the cost of this housing is also a material issue.

### **S1/S2: Privacy**

The issue of privacy is particularly salient in the mining, quarrying and coal industry, since when working on mine sites and living in provided accommodation the employee has little control over his/her privacy. This sustainability matter therefor includes how the undertaking is ensuring the workers right to privacy, both from a physical perspective and a digital perspective.

### **S3: Infrastructure. Including adequate housing, adequate food, water and sanitation and power.**

Mining and coal operations are interlinked with the location and communities in which these take place. This affects the employment and economic performance in the area, as well as potentially exposing the local community hazardous substances if operations are not handled with the proper care. Due to impact on the local communities, this sustainability matter includes, but is not limited to; the living infrastructures of the local communities; its economic impacts; the communities' access to adequate food, the operations land-related impacts, their impact on families, children, and community as a whole; smell, light, noise, and vibration pollution; and their access to water and sanitation.

### **S3: Impacts on land rights**

Mining and coal are land-intensive sectors, whose impacts can materialize when land is acquired to develop a project, but also when environmental pollution, ongoing deforestation, access restrictions

among others, further impede the capacity of indigenous and local communities to access, cultivate lands or benefit from forests. Those have the potential to infringe on communities' right to livelihood.

### **S3: Security-related impacts**

Mining and coal operations can be located in or near areas of active conflict or could be a source of local conflict. They therefore can have an impact on the security and potential conflicts in the area.

There has also been a history of sex-work in and around mining operations and the mining industry therefore has a high risk of sexual exploitation of women and children in the communities where it operates. This sustainability matter therefore also includes the risks of sexual violence and human trafficking in the affected community.

### **S3: Freedom of expression and freedom of assembly**

Due to the presence of mining and coal operations in countries where the enforcement of human rights may be low, there is a higher risk for violations of the civil and political rights among the undertaking's employees and local communities. This sustainability matter includes, but is not limited to, freedom of expression and freedom of assembly.

### **S3: Impacts on human rights and environmental defenders**

Research shows that the mining industry is one of the most dangerous sectors for Human Rights and environmental defenders with several hundred attacks globally in addition to continuous threats and abuse. Ensuring the rights and protection of Human Rights Defenders is therefore of the utmost importance in the mining industry.

### **S3: Particular rights of indigenous communities. Including free, prior and informed consent; self-determination; and cultural rights**

Mining and coal operations often take place in locations that are in close proximity to indigenous communities, and consequently have an impact on these communities due to its economic influence and the environmental consequences from these operations. Examples can be found in disputes and conflicts over land ownerships and absence of good faith in consultation; and also with the potential influx of workers from other areas can result in discrimination toward indigenous peoples regarding access to jobs and opportunities that can further undermine social cohesion, well-being and safety or the increased exposure of indigenous women to risks of prostitution, forced labour or violence. This sustainability matter would therefore cover if there has been a free, prior, and informed consent of indigenous people and the practice the undertaking has in place to ensure this. It also includes whether land-use rights, the right to self-determination as well as cultural right has been respected and indigenous communities' access to water is guaranteed.

### **S4: Access to quality information**

Undertakings in the mining and coal sector are often at the start of most value chains as they produce substances that often become a part of everyday products. It is therefore important that they provide detailed and accurate information that covers many sustainability matters where much information is relevant not only for end users, but for the communities and civil societies they are a part of. Thus, this topic covers access to information regarding the organization and the operations, but also privacy and data protection for employees and customers. In addition to this, freedom of expression is also covered in this topic as it is essential for this to be guaranteed for transparent communication and information to be disclosed.

## **ESRS 2: Sustainability governance, management and reporting**

In recent years sustainability management and sustainability reporting has become an increasing great part of corporate reporting and undertaking's everyday management. Subsequently that leads to a greater need for internal resources and governance structures to be in place to help manage the increasing requirements. The undertaking's governance structure and strategy to maintain this aspect of their operations is important as it is the underlying factor that will lead to achieving their sustainability goals.

### **G1: Corporate culture (Code of conduct and ethics)**

Ensuring that undertakings have a code of conduct and ethics that outlines the how the undertaking and its employees are expected to conduct themselves give security and guidance in their everyday work. Mining and coal operations are often in locations all over the world, including areas considered to be Conflict-Affected and High-Risk Areas (CAHRAs) in which the enforcement of Human Rights is less likely to take place. It is therefore important that undertakings within the mining and coal sector have a clearly stated code of conduct to ensure that the rights of employees and members of local communities are protected by the organization with no regard to the location of the operations.

### **G1: Corruption and bribery**

Due to the nature of mining operations, along with other extractive industries, the mining and coal sector has a high risk for corruption and bribery events as their value chains are complex and are often set in Conflict-Affected and High-Risk Areas (CAHRAs). As a result Human Rights, as well as compliance to the legislative and procedural requirements in mining operations, is often neglected. This may lead to an undertaking taking advantage of the uncertainty in their favour, which consequently damages the environment and has a negative impact on the well-being of employees and local communities. This sustainability matter does not only include the efforts carried by an organization to guarantee that these actions are not happening within it, but the tools also used to prevent this from occurring. It also covers the consequences of a breach of policy, potential reprimands for breeches and the whistle blowing systems and protections the undertaking has in place.

### **G1: Political engagement and lobbying activities**

Mining and coal operations, along with other extractive industries, are often important sectors within a countries industry and therefore have wide ranging impacts on the communities and countries they operate within. This leads to them often engaging in politics and lobbying activities to ensure that legislation and political decisions are in their favour. To ensure transparency and create legitimacy the undertaking shall disclose its political stances and lobbying activities, especially within the area of sustainability management and reporting.

When operating in CAHRAs, where the democratic safeguards are not necessarily as strong, political engagement and lobbying activities can lead to legislation that are more in the interest of the undertaking rather than interest of that community. Only when both the interests of the undertaking and the interests of the local community are upheld can there be an effective and value creating operation.

### **G1: Management of relationships (including payment practices)**

Many sustainability-related issues are complex and thus require collaboration between different stakeholders. Managing relationships with governments, business partners, suppliers and stakeholders is therefore of vital importance for undertakings in the mining industry.

Stakeholder engagement can prevent, monitor, and help mitigate any environmental or social risks. For this reason, stakeholder engagement shall be integrated into project planning and regular business operations through sharing of decision-making power with interested and affected parties and it shall be driven by stakeholders through ongoing consultation and follow-through. As per OECD guidelines on stakeholder engagement in the extractive industries, stakeholder engagement strategies shall prioritise engagement with most severely affected stakeholders, rather than most influential

stakeholders. This includes, but is not limited to, artisanal and small-scale miners and civil society organizations.

Undertakings must also ensure that all taxes, fees, and royalties related to mineral extraction, trade and export from conflict-affected and high-risk areas are paid to governments and, in accordance with the undertaking's position in the supply chain, we commit to disclose such payments in accordance with the principles set forth under the Extractive Industry Transparency Initiative (EITI). When disclosing data in relation to a specific project, undertakings can also provide more granular information on the government revenues collected from each individual extractive project.

Clarity and transparency regarding payments to governments from undertakings in the mining industry sector will contribute to a more efficient management of public funds and corruption. Such payments may be the origin of revenue for local communities and other regions, which may have increased demand for public spending. Project-level payment data is therefore relevant information to local communities, governments, and investors alike. It enables undertakings to demonstrate the economic contribution they are making in relation to specific projects, and the communities they affect. Where applicable, undertakings shall disclose the profit-sharing system in place with the local community.

### **G1: Cyber security**

The managing of operational sites within the mining, quarrying and coal sector is important for geopolitical reasons as well as sustainability reasons. The consequences of data breaches and other types of cyber security risks could potentially lead to major incidents and spills that could have detrimental impacts on the local environment and community.