

This paper has been prepared by the EFRAG Secretariat for discussion at a closed 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, 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 architecture proposed and its approach will be dis

**WORKING PAPER IN PREPARATION OF
DRAFT EUROPEAN SUSTAINABILITY REPORTING STANDARDS
ESRS Mining
FOR SR TEG DISCUSSION**

DISCLAIMER

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 public to follow the discussions in the meeting. Tentative decisions are made in public and reported in the EFRAG Update. EFRAG positions, as approved by the EFRAG SRB, are published as comment letters, discussion or position papers, or in any other form considered appropriate in the circumstances.

Objective	6
Interaction with other ESRS	6
Sector description and sustainability matters	7
Sector Description: Mining	7
Sustainability Matters: Mining Sector	8
Mining-specific Disclosure Requirements and specifications.....	9
Disclosure Requirement MIN 1 - List of operational sites	9
ESRS 2-related requirements	9
Disclosure Requirement related to ESRS 2 – SBM 1.1 Market position, strategy, business model(s) and value chain	9
Disclosure Requirement ESRS 2 – SBM 1.2 Market position, strategy, business model(s) and value chain	10
Disclosure Requirement related to ESRS 2 – SBM 2 Interests and views of stakeholders	10
Disclosure Requirement related to ESRS 2 – SBM 3 Material impacts, risks and opportunities with their interaction with strategy and business model(s)	10
ESRS E1-related requirements	11
Disclosure Requirement related to ESRS E1- 5	11
ESRS E2-related requirements	11
Disclosure Requirement related to ESRS E2-1, E2-2, E2-3 and E2-4.....	11
Disclosure Requirement MIN -2 -E2 Actions to prevent or mitigate negative impacts from acid mine drainage	11
Disclosure Requirement MIN 3 -E2- Compliance with GISTM	12
Disclosure Requirement MIN 4 -E2-Disclosure of nitrogen oxides, sulphur oxides and other significant air emissions	12
Disclosure Requirement MIN 5 -E2– Significant spills and other critical incidents	13
Disclosure Requirement MIN 6 -E2-Tailings facilities and impoundments.....	13
ESRS E4-related requirements	14
Disclosure Requirement related to [draft] ESRS E4-1.....	14
Disclosure Requirement related to [draft] ESRS E4-2.....	14
Disclosure Requirement related to [draft] ESRS E4-5.....	14
Disclosure Requirement MIN 7 – E4– Operational sites in or near sites with protected conservation status or endangered species habitat.....	15
ESRS E5-related requirements	15
Disclosure Requirement related to [draft] ESRS E5-5 Resource use and circular economy.....	15

ESRS S1 Own workforce -related requirements	16
Disclosure Requirement related to [draft] ESRS S1-13 Training and skills development indicators	16
Disclosure Requirement related to [draft] ESRS S1-14 Health and Safety indicators	16
Disclosure Requirement related to [draft] ESRS S1-11 Social Protection.....	17
Disclosure Requirement MIN 9 -S1- Percentage of security personnel receiving training in undertakings’ human rights policies.....	17
ESRS S1/S2 -related requirements.....	18
[Disclosure Requirement MIN xx S1/S2 - Specification of datapoints for [draft] ESRS S1 para 16 and [draft] ESRS S2 para 11 (b) in relation to child and forced labour and children’s rights on the closure of operational sites]	18
ESRS S3 Affected communities -related requirements	18
Disclosure Requirement related to [draft] ESRS S3-2 Processes for engaging with affected communities about impacts -Closure and post-closure	18
Disclosure Requirement related to [draft] S3 –4 Taking action on material impacts, and approaches to mitigating material risks and pursuing material opportunities related to affected communities, and effectiveness of those actions and approaches.....	18
Disclosure Requirement MIN-10 S3 – Metrics of negative impacts on affected communities....	19
Disclosure Requirement MIN 11 – S3– Operational sites in or near areas of conflict.....	19
Disclosure Requirement MIN 12 -S3 – Policy to deal with human rights defenders.....	20
ESRS G1- related requirements	20
Disclosure Requirement related to [draft] ESRS G1 Business conduct.....	20
Disclosure Requirement MIN- 13 - G1 Contract transparency	20
Disclosure Requirement MIN- 14-G1 – Sales to, support received from and payments made to governments	21
Disclosure Requirement MIN - 15 -G1 – List of beneficial owners	21
Disclosure Requirement MIN - 16 – G1 – Suppliers assessed for social impacts	22
Disclosure Requirement MIN-17-G1 – Number of data breaches.....	22
Disclosure Requirement MIN-18 – G1 Policies and practices relating to cybersecurity	22
Appendix A: Defined Terms	23
Appendix B: Application Requirements	25
Application Requirement MIN-1– List of operational sites	25
ESRS 2-related requirements	25
Application Requirement related to ESRS 2- GOV4.....	25

ESRS E1 -related requirements	26
Application Requirement related to ESRS E1- 5	26
ESRS E2 -related requirements	26
Application Requirement MIN 4 -E2 – Nitrogen oxides, sulphur oxides and other significant air emissions.....	26
Application Requirement MIN 2 -E2 Actions to prevent or mitigate negative impacts from acid mine drainage	26
Application Requirement MIN 6 -E2 - Tailings facilities and impoundments	27
ESRS E4 -related requirements	28
Application Requirement MIN 7 – E4– Operational sites in or near sites with protected conservation status or endangered species habitat.....	28
ESRS E5 -related requirements	29
Disclosure Requirement related to [draft] ESRS E5-5 Resource use and circular economy.....	29
ESRS S1 -related requirements	30
Application Requirement related to [draft] ESRS S1-13	30
Application Requirement [draft]-S1-14 Social protection	30
Application Requirement MIN 9 -S1- Percentage of security personnel receiving training in undertakings’ human rights policies.....	31
ESRS S3 -related requirements	32
Application Requirement related to ESRS S3-2 - Approach to engage with local communities ..	32
Application Requirements related to [draft] ESRS S3-2 Processes for engaging with affected communities about impacts -Closure and post-closure	32
Application Requirement related to [draft] S3 –4 Taking action on material impacts, and approaches to mitigating material risks and pursuing material opportunities related to affected communities, and effectiveness of those actions and approaches.....	33
Application Requirement MIN-10 S3 – Metrics of negative impacts on affected communities ..	33
Application Requirements MIN 11 – S3– Operational sites in or near areas of conflict	34
Application Requirements MIN 12 -S3 – Policy to deal with human rights defenders	35
ESRS G1 -related requirements	35
Application Requirement MIN- 14-G1 – Sales to, support received from and payments made to governments	35
Application Requirement MIN - 16 – G1 – Suppliers assessed for social impacts.....	36
Appendix C: Sustainability Matters.....	37
Appendix D:NACE Codes	45

Objective

- 1 The objective of this [draft] ESRS is to specify disclosure requirements applicable to all undertakings within the Mining Sector that are additional to the sector-agnostic ESRS disclosures. 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 In addition, this [draft] ESRS also specified Mining sector specific application requirements to existing sector-agnostic disclosure requirements, which should be taken in consideration by the undertaking in the preparation of their sustainability disclosures
- 3 Disclosure Requirements in this [draft] ESRS will enable users of the sustainability statements to understand the undertaking's material impacts, as well as related material risks and opportunities arising with regard to a list of sustainability matters that are material for the undertakings in the Mining Sector.
- 4 This [draft] Standard requires undertakings in the sector to disclose:
 - (a) the material actual or potential, positive or negative impacts in relation the environmental, social and governance matters material for the Mining Sector;
 - (b) any actions taken, and the result of such actions, to prevent or mitigate actual or potential material negative impacts;
 - (c) the nature, type and extent of the undertaking's material risks and opportunities related to its impacts and dependencies in relation to the list of matters that are material for the Mining Sector (as identified in appendix C of this [draft] ESRS), and how the undertaking manages them; and
 - (d) the financial effects on the undertaking over the short-, medium- and long-term time horizons of material risks and opportunities.

Interaction with other ESRS

- 5 This Mining sector [draft] ESRS identifies a list of matters that shall be considered material for any undertaking operating in the Mining sector, irrespective of the outcome of their materiality assessment. The undertaking within the scope of application of this [draft] ESRS shall consider, for the purposes of paragraph 31 of ESRS 1 General Requirements, that the sustainability matters listed in the table in paragraph 16 below are material. The undertaking shall apply paragraphs 33 to 39 of ESRS 1 to define the information to be included in its sustainability statements in relation to each of these matters.
- 6 An undertaking is within the scope of application of this [draft] ESRS when it discloses Mining as a significant sector according to paragraph 38 (b) and/or (c) of ESRS 2 General Disclosures, using the criteria in AR 12 of ESRS 2 to define a significant sector.
- 7 [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 are considered as pertaining to the Mining sector are listed in Appendix D to this [draft] ESRS, consistent with SEC 1.
- 8 This Mining sector [draft] ESRS also stipulates sector specific Disclosure Requirements applicable for undertakings in the Mining sector and includes two types of requirements:
 - (a) requirements that provide sector-specifications in relation to sector agnostic Disclosure Requirements in order to either (i) complement with additional datapoints - presented in the main body of this [draft] Standard as sector-agnostic related

- Disclosure Requirement - or (ii) support the application of Disclosure Requirements - presented in the Application Requirements of this [draft] Standard and therefore to be discloses if the related Disclosure Requirement from sector-agnostic disclosure is material;
- (b) sector-specific Disclosure Requirements to be reported additionally to the Disclosure Requirements in the sector-agnostic standards – presented in the main body of this standard and when applicable accompanied by Application Requirements in Appendix B of this standard. These Disclosure Requirements are separately numbered.
- 9 Undertakings in the Mining sector shall apply the [draft] cross cutting and [draft] topical ESRS requirements in addition to requirements of this Standard to both its own operations and, where relevant, to reporting on material impacts, risks and opportunities in the undertaking's value chain.
- 10 When preparing its sustainability statements, the undertaking shall group the disclosures by cross-cutting reporting area and, where applicable, by sustainability matter according to the provisions set out in [draft] ESRS 1 paragraph 117 . Disclosures stemming from the [draft] Mining ESRS shall be presented alongside the disclosures required by the corresponding sector-agnostic ESRS.

Sector description and sustainability matters

Sector Description: Mining

- 11 The Mining sector includes the extraction of metals and minerals. It encompasses extraction activities in relation to, amongst others: aluminium, antimony, asbestos, baryte, bauxite, bentonite, copper, cobalt, diatomite, feldspar, fluorspar, gold, graphite gypsum, iron, kaolin, lead, lithium, magnesite, manganese, molybdenum, nickel, peat, perlite, platinum, potash, salt, silver, sulphur, titanium, talc, tantalum, thorium, tungsten, uranium, vanadium, and zinc.
- 12 It also addresses quarrying activities in relation to hard rock, natural sand, gravel, sandstone, limestone, clay, chalk, slate, and gemstones.
- 13 Extraction can be achieved by different methods such as underground or surface mining, well operation, seabed mining, salars' exploitation, geothermal mining etc.
- 14 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.
- 15 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.

Sustainability Matters: Mining Sector

- 16 This [draft] ESRS sets out Disclosure Requirements related to the sustainability matters considered material to the Mining sector, listed in the table below. A Detailed descriptions of them is included in Appendix C.

Environmental	Social	Governance
E1: Climate change adaption (*)	S1: Working conditions (*)	G1: Corporate culture (*)
E1: Energy (*)	S1: Equal treatment and opportunities for all (*)	G1: Corruption and bribery (*)
E2: Pollution of Air (*)	S1: Other work-related rights (*)	G1: Anti-competitive behaviour
E2: Pollution of Water (*)	S2: Working conditions (*)	G1: Political engagement and lobbying activities (*)
E2: Pollution of Soil (*)	S2: Equal treatment and opportunities for all (*)	G1: Management of relationships including payment practices (*)
E2: Pollution of living organisms and food resources (*)	S2: Other work-related rights (*)	
E2: Substances of concern (*)	S3: Communities economic, social, and cultural rights (*)	
E2: Industrial hazards	S3: Communities' civil and political rights (*)	
E3: Water withdrawals (*)	S3: Particular rights of indigenous peoples (*)	
E3: Water consumption (*)	S4: Information-related impacts for consumers and/or end users (*)	
E3: Water use (*)		
E3: Water discharges in water bodies and in the oceans (*)		
E3: Habitat degradation and intensity of pressure on marine resources (*)		
E4: Direct impact drivers on biodiversity loss (*)		
E4: Impacts on the state of species (*)		
E4: Impacts on the extent and condition of ecosystems (*)		
E4: Impacts and dependencies on ecosystem services (*)		
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.)		

Mining-specific Disclosure Requirements and specifications

Disclosure Requirement MIN 1 - List of operational sites

- 1 The undertaking shall disclose its operational sites**
- 2 The objective of this Disclosure Requirement is to enable an understanding of the undertakings' operation sites, their potential risks for:
 - (a) biodiversity and an up-to-date status report of the different stages of closure and rehabilitation activities related to them. This disclosure complements the measures required by art.10 of Directive 2006/21 of 15 March 2006 on the management of waste from extractive industries.
 - (b) where indigenous peoples are present or affected by activities of the undertaking.
- 3 The undertaking shall specify their potential risks for biodiversity and the closure and rehabilitation activities related to them. [For each operational site/for the key operational sites – TO BE DISCUSSED] the undertaking shall include:
 - (a) a description of the potential risk for biodiversity;
 - (b) whether the site is located in or near a protected area or a high-biodiversity area;
 - (c) where applicable, the size, location and status of habitats protected or restored;
 - (d) whether the site has a closure and rehabilitation plans in place;
 - (e) whether the site has been closed;
 - (f) whether the site is undergoing closure activities.
- 4 The undertaking shall specify an exhaustive list of locations of operations where indigenous peoples are present or affected by activities of the undertaking;

ESRS 2-related requirements

Disclosure Requirement related to ESRS 2 – SBM 1.1 Market position, strategy, business model(s) and value chain

- 5 The undertaking shall provide a breakdown of its turnover by NACE codes and of its net revenue by countries in compliance with the Extractives Industry Transparency Initiative (“EITI”) quality assurance mechanism.**
- 6 The objective of this Disclosure Requirement is to provide insight into the turnover by NACE codes and into the extent to which the undertaking is active in countries that have subscribed to the EITI principles about the prudent use of natural resource exploitation contributing to sustainable economic growth.
- 7 The undertaking shall provide a breakdown of its turnover (both in monetary amount and as a percentage of its total turnover) per NACE-code activity where it is active for the following NACE-code activities:
 - (a) B.07 – Mining of metal ores

- (b) B.08 – Other mining and quarrying
 - (c) B.09 – Mining support activities
- 8 The undertaking shall disclose the breakdown of its revenue split [Or production – TO BE DISCUSSED] over the following categories of countries, according to their compliance with the EITI quality assurance standards as per its scale:
- (a) Countries with a very high progress in complying;
 - (b) Countries with a high to satisfactory progress in complying;
 - (c) Countries with a moderate to meaningful progress in complying;
 - (d) Countries with a fairly low to inadequate progress in complying;
 - (e) Countries with low to no progress in complying;
 - (f) Other countries.
- 9 The EITI categories of quality assurance are used to disclose alignment with how the principles are being implemented locally. The category “other” refers to countries for which the assessment is suspended or to countries for which the compliance has yet to be assessed.

Disclosure Requirement ESRS 2 – SBM 1.2 Market position, strategy, business model(s) and value chain

- 10 The undertaking shall disclose, for each operational site, the direct economic value generated and distributed.**
- 11 The objective of this Disclosure Requirement is to provide insight of how the undertaking is creating value for its stakeholders.
- 12 The undertaking shall disclose, [for each operational site/for the key operational sites/for each country – TO BE DISCUSSED], the direct economic value generated and distributed.

Disclosure Requirement related to ESRS 2 – SBM 2 Interests and views of stakeholders

- 13 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.

Disclosure Requirement related to ESRS 2 – SBM 3 Material impacts, risks and opportunities with their interaction with strategy and business model(s)

- 14 When disclosing the undertaking’s impacts on its own workforce, it shall disclose, where applicable, the undertaking’s policies, actions and targets to help own workers manage the adverse impacts arising from the closure of its operational site(s).**
- 15 The objective of this Disclosure Requirement is to provide an understading on how the undertaking helps its own workers and own workers’ communities to overcome the closure of an operational site they have been dependent upon for many years.
- 16 The socio-economic environment of local communities (unemployment, people moving out affecting the liveability of remaining supporting activities such as local shops, schools, and more) can be affected by the closure of an operational site(s).

- 17 The undertaking shall disclose 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..).
- 18 The undertaking shall also consider the collaborative efforts, projects and programs that are set up to manage the socio-economic impact of closure and restoration programs and disclose these.

ESRS E1-related requirements

Disclosure Requirement related to ESRS E1- 5

- 19 **The undertaking shall complement the disclosure provided under ESRS E1-5 with information about the energy consumption in its value chain.**
- 20 The objective of this Disclosure Requirement is to identify the energy consumption of the undertaking's upstream and downstream activities related to its operations and the actions planned or implemented to reduce this energy consumption around these activities.
- 21 The undertaking shall include the following information:
 - (a) energy consumption outside of the undertaking (upstream and downstream), in MWh;
 - (b) standards, methodologies, assumptions, and/or calculation tools used, including the source of the conversion factors used; and
 - (c) the actions planned or implemented to reduce the energy consumptions connected with the undertaking's upstream and downstream activities.

ESRS E2-related requirements

Disclosure Requirement related to ESRS E2-1, E2-2, E2-3 and E2-4

- 22 **In disclosing the pollutants generated or used during the extraction process, the undertaking shall include methane in the list of pollutants to be disclosed.**
- 23 The objective of this Disclosure Requirement is ensure that when disclosing on policies, actions and targets related to pollution and on the pollutants, the undertaking makes explicit reference to methane as a pollutant.

Disclosure Requirement MIN -2 -E2 Actions to prevent or mitigate negative impacts from acid mine drainage

- 24 **The undertaking shall disclose its actions to prevent or mitigate negative impacts from acid mine drainage.**
- 25 The objective of this Disclosure Requirement is to provide an insight into what the undertaking does to prevent or mitigate the negative impacts from acid mine drainage.
- 26 The undertaking shall disclose 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.
- 27 The undertaking shall state which minerals are produced for each of the mine sites above.

Disclosure Requirement MIN 3 -E2- Compliance with GISTM

- 28 **The undertaking shall disclose whether and how the undertaking complies with the Global Industry Standard on Tailings Management (“GISTM”).**
- 29 The objective of this Disclosure Requirement is to understand if the undertaking is following the Industry Standard with respect to the treatment of tailings.
- 30 The undertaking shall disclose whether the undertaking complies with the GISTM and, if so, provide the most recent information disclosed in line with GISTM Principle 15.

Disclosure Requirement MIN 4 -E2-Disclosure of nitrogen oxides, sulphur oxides and other significant air emissions

- 31 **The undertaking shall disclose nitrogen oxides, sulphur oxides, mercury and other significant air emissions.**
- 32 The objective of this Disclosure Requirement is to provide insight in the volume of significant air emissions caused by each operational site of the undertaking.
- 33 The undertaking shall disclose, [per operational site/per key operational sites – TO BE DISCUSSED], the volume of nitrogen oxides, sulphur oxides, mercury and other significant air emissions over the last 12-month period as well as in total for the entire duration of the operational site. The Disclosure Requirement is to be fulfilled at operational site level. The undertaking shall report the following information:
- (a) Significant air emissions, in kilograms or multiples, for each of the following:
- (i) NO_x
 - (ii) Sox
 - (iii) Mercury
 - (iv) Persistent organic pollutants (POP)
 - (v) Volatile organic compounds (VOC)
 - (vi) Hazardous air pollutants (HAP)
 - (vii) Particulate matter (PM)
 - (viii) Other standard categories of air emissions identified in relevant regulations such as the fine particulate matter (PM_{2,5}) as defined in Article 3, points (7) to (8), of Directive (EU) 2016/2284 of the European Parliament and of the Council;
- (b) Source of the emission factors used.
- (c) Standards, methodologies, assumptions, and/or calculation tools used.
- 34 The undertaking shall also describe the approach of selecting the different standards and methodologies used to calculate the significant air emissions.

Disclosure Requirement MIN 5 -E2- Significant spills and other critical incidents

- 35 **The undertaking shall disclose the number of critical incidents in the reporting period, including their impacts, as well as the number, volume and impact of recorded significant spills.**
- 36 The objective of this Disclosure Requirement is to understand how many critical incidents, including specifically how many spills, happened, as well as their impacts. Quantitative data supports the understanding of whether the incident rate and impacts improves over time.
- 37 The undertaking shall disclose the total number of critical incidents in the reporting period and their impacts, by type of pollutant involved. 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. The disclosure shall include:
- (a) a description of the incident,
 - (b) how the undertaking defines a 'critical' incident and a description of the impact.
- 38 The undertaking shall disclose the total number and total volume of recorded significant spills. [For each spill/ for the significant spills – TO BE DISCUSSED], the undertaking shall disclose:
- (a) location of spill,
 - (b) volume of spill,
 - (c) material of spill, categorised by: oil spills (soil or water surfaces), fuel spills (soil or water surfaces), spills of waste (soil or water surfaces), spills of chemicals (mostly soil or water surfaces), and other.
 - (d) a description of the impacts of each spill,
 - (e) how the undertaking defines a 'significant' spill.
- 39 The undertaking shall report on spills that occurred during the reporting period as well as spills from previous reporting periods that have not been entirely cleaned-up.

Disclosure Requirement MIN 6 -E2-Tailings facilities and impoundments

- 40 **The undertaking shall disclose the list of tailing facilities, how it manages them and the list of tailing impoundments according to their hazard potential.**
- 41 The objective of this Disclosure Requirement is to understand how the undertaking manages its tailings facilities and to provide an estimate of how hazardous the undertakings tailing impoundments may be; disclosing the most recent risk assessments relating to these facilities support the assessment of the risk of future tailings failures.
- 42 The undertaking shall describe actions taken to
- (a) manage impacts from tailings facilities, including during closure and post-closure and
 - (b) prevent catastrophic failures of tailings facilities.
- 43 In addition, the undertaking shall provide
- (a) a description of the tailing facilities in place [for each operational site/for key operational sites – TO BE DISCUSSED], including legacy ones;

- (b) the list of the tailing impoundments classified according to their hazard potential.
- 44 The disclosure shall include [for each operational site/for key operational sites – TO BE DISCUSSED] including legacy ones, the tailings facilities in place, their name, location, and ownership status. 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; and
 - (d) the dates of the most recent and next independent technical reviews.

ESRS E4-related requirements

Disclosure Requirement related to [draft] ESRS E4-1

- 45 *The Transition plan disclosed according to ESRS E4-1 shall report an explanation [[for each operational site/for key operational sites – TO BE DISCUSSED] and shall take into consideration the entire value chain.*
- 46 The objective of this Disclosure Requirement is for the undertaking to provide a transition plan by operational site [for each operational site/for key operational sites – TO BE DISCUSSED], including the entire value chain.
- 47 When disclosing its transition plan, the undertaking shall provide an explanation [for each operational site/for key operational sites – TO BE DISCUSSED] on how its strategy and business model ensures compatibility with the targets of no net loss by 2030, net gain from 2030 and, through recovery and restoration, full recovery and restoration, full recovery by 2050 explicitly taking into consideration the entire value chain.

Disclosure Requirement related to [draft] ESRS E4-2

- 48 **The policies implemented to manage material impacts, risks and opportunities related to biodiversity and ecosystems, disclosed according to ESRS E4-2, shall be detailed [for each operational site/for key operational sites – TO BE DISCUSSED]**
- 49 The objective of this Disclosure Requirement is for the undertaking to outlines policies and commitments with respect to biodiversity loss [for each operational site/for key operational sites – TO BE DISCUSSED].
- 50 The undertaking shall describe policies and commitments to achieving no net loss or net gain to biodiversity on operational sites; and report whether these commitments apply to existing and future operations.

Disclosure Requirement related to [draft] ESRS E4-5

- 51 **The undertaking shall report metrics related to material impacts resulting in biodiversity and ecosystem change, following ESRS E4-5, per each operational site located in or adjacent to protected areas or high biodiversity areas.**
- 52 The objective of this Disclosure Requirement is for the undertaking to provide information on impacts on biodiversity arising from its operational sites located in or adjacent to protected areas or high-biodiversity areas.

- 53 The undertaking shall include a list of operational sites owned, leased, managed in or adjacent to protected areas or key biodiversity areas and include per each operational site:
- (a) a description the material impacts on biodiversity its exploration has or has had, thereby specifying the impacts to the affected habitats and ecosystems;
 - (b) 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.

Disclosure Requirement MIN 7 – E4– Operational sites in or near sites with protected conservation status or endangered species habitat

- 54 The undertaking shall disclose its operational sites in or near areas of conflict.
- 55 The objective of this Disclosure Requirement is to enable an understanding of how many operational sites are situated in or near sites with protected conservation status or endangered species habitat as well as to provide an overview of the undertakings' extraction sites located in these areas.
- 56 The undertaking shall provide an exhaustive list of operational sites that are in or near sites with protected conservation status or endangered species habitat. In addition, it shall provide a description of the approach used, for each of these operational sites, to ensure respect for conservation status or endangered species habitat.
- 57 Further, the undertaking shall disclose the percentage of proved and probable reserves in or near sites with protected conservation status or endangered species habitat.

ESRS E5-related requirements

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

- 58 **When disclosing about its waste according to Disclosure Requirement E5-5, the undertaking shall disclose the different categories of waste according to the European Waste Catalogue and shall provide information about its waste-management process in case of deep-sea tailings disposal.**
- 59 The objective of this Disclosure Requirement is to provide the information required to complement the Waste management plan as specified by Article 5 of Directive 2006/21 of 15 March 2006 on the management of waste from extractive industries.
- 60 When disclosing about its waste according to Disclosure Requirement E5-5, the undertaking shall:
- (a) shall 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 (in the case of deep-sea mining this is often known as Deep-Sea Tailings Disposal (DSTD)).

ESRS S1 Own workforce -related requirements***Disclosure Requirement related to [draft] ESRS S1-13 Training and skills development indicators***

- 61 **When disclosing the training and development indicators defined in [draft] ESRS S1-13, the undertaking shall disclose the average hours of health, safety, and emergency response training for its employees.**
- 62 The objective of this Disclosure Requirement is to enable an understanding the extent to which the training and skills developments' training cover health and safety management for the undertaking's employees.
- 63 The disclosure required by paragraph 79 shall include :
- (a) the undertaking's general approach and processes to ensure the quality of the training services related to work-related hazards, hazardous activities, or hazardous situations which contribute to the identification and elimination of hazards and minimisation of risks for its employees.
 - (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 related to [draft] ESRS S1-14 Health and Safety indicators

- 64 **When disclosing the health and safety indicators according to [draft] ESRS S1-14, the undertaking shall specify fatalities, injuries and work-related ill health due to chemicals and the physical work environment.**
- 65 The objective of these Disclosure Requirements is to allow an understanding of the performance of the health and management system for the undertaking to provide insight into its health care and safety management system established to prevent work-related injuries caused by chemicals and the physical work environment.
- 66 The disclosure required by paragraph 82 shall include the following information broken down between employees and non-employee workers in own workforce:
- (a) the disclosure of other dangerous chemicals that workers are exposed to in its operations;
 - (b) the disclosure of other dangerous factors in the physical work environment, including:
 - (i) noise and vibrations;
 - (ii) ergonomic risk factors;
 - (iii) psycho-social organizational work environment; or
 - (iv) thermal strain and stress (including heat rash, heat fatigue, heat cramps, heat syncope, heat exhaustion and heat stroke); and

- (c) a description of the occupational health services functions that contribute to the identification and elimination of hazards and minimisation of risks and an explanation
- (d) the number of fatalities, injuries and cases of work-related ill health as a result of working with chemicals (including but not limited to silica, asbestos, and diesel);
- (e) how the undertaking ensures the quality of these services and facilitates workers' access to them;

Disclosure Requirement related to [draft] ESRS S1-11 Social Protection

- 67 **When disclosing the coverage of its own workers by social protection against loss of income due to major life events according to [draft] ESRS S1-11, the undertaking shall disclose the access of its own workers to non-occupational medical and healthcare services.**
- 68 The objective of this Disclosure Requirement is to enable an understanding of the undertaking's employees coverage of non-occupational medical and healthcare services.
- 69 As per paragraph 85, the undertaking shall disclose, including specifying if these only apply to employees or non-employees workers where applicable, :
- (a) how the undertaking facilitates workers' access to non-occupational medical and healthcare services as well as the scope of access;
 - (b) a description of voluntary health promotion services and programs offered to workers to address major non-work-related health risks, including the specific health risks addressed, and how the organisation facilitates workers' access to these services and programs.

Disclosure Requirement MIN 9 -S1- Percentage of security personnel receiving training in undertakings' human rights policies

- 70 **The undertaking shall disclose the percentage of security personnel that has received training in the undertaking's human rights policies and other security procedures.**
- 71 The objective of this Disclosure Requirement is to understand to which extent security providers are aware of the necessary respect for human rights.
- 72 The undertaking shall disclose the percentage of security personnel (within own workforce and workers in the value chain) that has received training in the undertaking's human rights policies and other security procedures.

ESRS S1/S2 -related requirements

[Disclosure Requirement MIN xx S1/S2 - Specification of datapoints for [draft] ESRS S1 para 16 and [draft] ESRS S2 para 11 (b) in relation to child and forced labour and children's rights on the closure of operational sites]

ESRS S3 Affected communities -related requirements**Disclosure Requirement related to [draft] ESRS S3-2 Processes for engaging with affected communities about impacts -Closure and post-closure**

- 73 **When disclosing its processes to engage with affected communities about actual and potential material impacts following [draft] ESRS S3-2, the undertaking shall disclose its actions and financial provisions to limit the impacts caused by the closure of its operational sites.**
- 74 The objective of this Disclosure Requirement is to enable an understanding of whether and how the undertaking engages with affected communities, their legitimate representatives, or with credible proxies about actions to limit the impacts on affected communities caused by closure of an operational site.
- 75 When disclosing its processes to engage with affected about impacts following [draft] ESRS S3-2, the undertaking shall disclose:
- (a) 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);
 - (b) the total monetary value of material financial provisions made by the undertaking for closure and rehabilitation, including environmental and socioeconomic post-closure monitoring and aftercare for operational sites, and provide a breakdown of this total [by project/by key projects – TO BE DISCUSSED].

Disclosure Requirement related to [draft] S3–4 Taking action on material impacts, and approaches to mitigating material risks and pursuing material opportunities related to affected communities, and effectiveness of those actions and approaches

- 76 **The undertaking shall disclose its approaches to taking action on affected communities and to mitigating material risks and pursuing material opportunities**
- 77 The objective of this Disclosure Requirement is to provide insight on the interactions with, programmes developed, percentage of top management recruited from the affected communities and significant investment on infrastructure and services supported activities.
- 78 The undertaking shall disclose [for each operational site/for the key operational sites – TO BE DISCUSSED]:
- (a) the percentage of senior management that are recruited from the local community;
 - (b) the percentage of the procurement budget spent on suppliers local to that operation;

- (c) 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;”
- 79 If material, the undertaking shall also disclose [for each operational site/for the key operational sites – TO BE DISCUSSED]:
- (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 shall include equity shares acquired by communities and their value;
 - (c) the most recent examples of involvement in the process of seeking free, prior, and informed consent from indigenous peoples to any of the undertakings’ activities, and whether an agreement has been reached and if it is publicly available.

Disclosure Requirement MIN-10 S3 – Metrics of negative impacts on affected communities

- 80 The undertaking shall disclose, [for each operational site/for key operational sites] metrics of negative impacts on affected communities.**
- 81 The objective of this Disclosure Requirement is to enable an understanding of the negative impacts of the undertaking on affected communities.
- 82 The undertaking shall disclose:
- (a) whether it has caused or contributed to involuntary resettlement or where such a resettlement is ongoing; in this case the undertaking shall disclose the operational site involved. It shall also describe measures taken to ensure that livelihoods and human rights have been preserved and valuation methods used and how legitimate tenure rights holders have been involved in determining valuation.

Disclosure Requirement MIN 11 – S3– Operational sites in or near areas of conflict

- 83 The undertaking shall disclose its operational sites in or near areas of conflict.**
- 84 The objective of this Disclosure Requirement is to enable an understanding of how many operational sites are situated in conflict areas and how the undertaking is ensuring respect for human rights by security providers, as well as to provide an overview of the undertakings’ extraction sites located in areas mentioned in paragraph 85.
- 85 The undertaking shall provide an exhaustive list of operational sites that are in or near areas of conflict. In addition, it shall provide a description of the approach used, for each of these operational sites, to ensure respect for human rights by public and private security providers and those of its suppliers.
- 86 Further, the undertaking shall disclose the percentage of proved and probable reserves:
- (a) in or near areas of conflict
 - (b) in or near indigenous land

Disclosure Requirement MIN 12 -S3 – Policy to deal with human rights defenders

- 87 **The undertaking shall disclose how it deals with human rights defenders and the number of cases the undertaking and/or its suppliers are involved in.**
- 88 The objective of this Disclosure Requirement is to understand how the undertaking deals with human rights defenders in the areas it is active as well as the number of cases the undertaking and/or its suppliers are involved in.
- 89 The undertaking shall describe [for each of its projects /for the key projects – TO BE DISCUSSED], the policy it applies in dealing with human rights defenders. In addition, the undertaking shall provide a list of cases of attacks on human rights defenders where the undertaking and/or one of its suppliers are named and the steps taken to address allegations. This list shall contain anonymised gender and ethnicity disaggregated data of human rights defenders, and how many have filed complaints through the undertaking's grievance mechanisms and their eventual resolution.

ESRS G1- related requirements***Disclosure Requirement related to [draft] ESRS G1 Business conduct***

- 90 **The undertaking shall disclose its participation in public policy development and lobbying.**
- 91 The objective to this Disclosure Requirement is to understand how the undertaking works at promoting its views in politics. The objective of this Disclosure Requirement is understand the size and how an undertaking attempts to influence politics. The objective of this Disclosure Requirement is to understand the undertakings stance on climate change and understand how this effects its political engagement.
- 92 The undertaking shall include:
- (a) a description describe of its stance on significant issues that are the focus of its participation in public policy development and lobbying;
 - (b) any differences between these positions and its stated policies, goals, or other public positions;
 - (c) whether it is a member of, or contributes to, any representative associations or committees that participate in public policy development and lobbying, including:
 - (i) the nature of this contribution;
 - (ii) any differences between the undertaking's stated policies, goals, or other public positions on significant issues related to climate change, and the positions of the representative associations or committees.
 - (d) a description of its approach to public policy development and its lobbying activities specifically on the topic of climate change.

Disclosure Requirement MIN- 13 - G1 Contract transparency

- 93 **The undertaking shall disclose its approach to contract transparency, including:**
- (a) **Whether contracts and licenses are made publicly available and, if so, where they are published**

(b) if contracts or licenses are not publicly available, the reason for this and actions taken to make them public in the future

- 94 The objective of this Disclosure Requirement is to understand the openness of the undertaking about its contracts and licences concluded.

Disclosure Requirement MIN- 14-G1 – Sales to, support received from and payments made to governments

95 The undertaking shall disclose its sales to, support received from and payments made to governments.

- 96 The objective of this Disclosure Requirement is to provide transparency on the economic relationships with the governments.

- 97 The undertaking shall disclose:

- (a) the sales to government organizations, including for mineral extraction, trade, handling, transport and export, and including sales to third parties appointed by the state on their behalf;
- (b) the fee or payment for the sales to government organizations (or third parties acting on the government's behalf);
- (c) various types of materials purchased, names of the buying undertaking(s), and the recipient of the fee;
- (d) a breakdown of the payments to governments levied at the project-level, by project and revenue streams [granularity TO BE DISCUSSED];
- (e) the monetary value of financial assistance received by the undertaking from any government during the reporting period, split [by country/ by key country – TO BE DISCUSSED];
- (f) whether, and the extent to which, any government is present in the shareholding structure and in which country;
- (g) all payments to governments relating to mining extraction, trade and transport from all concerned / affected countries, in accordance with jurisdictional legislation. Undertakings shall disclose all relevant payments in line with the principals outlined in the Extractive Industry Transparency Initiatives (EITI).

Disclosure Requirement MIN - 15 -G1 – List of beneficial owners

98 The undertaking shall disclose its beneficial owners and how it identifies the beneficial owners of business partners, including joint ventures and suppliers.

- 99 The objective of this Disclosure Requirement is to understand who the undertakings beneficial owners are and how the undertaking identifies them.

- 100 The undertaking shall disclose:

- (a) its beneficial owners. This includes, but is not limited to name, nationality, country of residence, any politically exposed persons;
- (b) an explanation of how it identifies the beneficial owners of business partners, including joint ventures and suppliers.

Disclosure Requirement MIN - 16 – G1 – Suppliers assessed for social impacts

- 101 The undertaking shall disclose the outcome of its assessment of its suppliers for social impacts.**
- 102 The objective of this Disclosure Requirement is to understand the degree of actual and potential negative social impacts in the supply chain of the undertaking and to understand to which extent the undertaking uses social criteria in selecting its suppliers.
- 103 The undertaking shall disclose:
- (a) the number of suppliers assessed for fundamental human rights and decent working conditions;
 - (b) the percentage of new suppliers that were screened using social criteria.
 - (c) the number of suppliers identified as having significant actual and potential negative social impacts.
 - (d) significant actual and potential negative social impacts identified in the supply chain.
 - (e) percentage of suppliers identified as having significant actual and potential negative social impacts with which improvements were agreed upon as a result of the assessment; and
 - (f) percentage of suppliers identified as having significant actual and potential negative social impacts with which relationships were terminated as a result of assessment and why.

Disclosure Requirement MIN-17-G1 – Number of data breaches

- 104 The undertaking shall disclose the:**
- a) number of data breaches**
 - b) percentage involving classified or restricted information**
 - c) number of operational sites and;**
 - d) how the potential for future cyber security breaches are being prevented.**
- 105 The objective this Disclosure Requirement is to provide an overview of the number of data breaches and who is impacted by those data breaches.

Disclosure Requirement MIN-18 – G1 Policies and practices relating to cybersecurity

- 106 The undertaking shall describe its policies and practices relating to cybersecurity threats or attacks.**
- 107 The objective this Disclosure Requirement is to gain an understanding of the undertaking's policies regarding cybersecurity and management of risks.
- 108 The undertaking shall also describe it's approach to security management for existing operations, projects planned or underway and new locations for business activities, including assessment of threats, vulnerabilities and risks.

Appendix A: Defined Terms

Active conflict	Areas identified by the presence of armed conflict, widespread violence, including violence generated by criminal networks, or other risks of serious and widespread harm to people. Armed conflict may take a variety of forms, such as a conflict of international or non-international character, which may involve two or more states, or may consist of wars of liberation, or insurgencies, civil wars.
Biosphere Reserves recognised within the framework of UNESCO's Man and the Biosphere (MAB) Programme	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.
Community development program	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.
Critical incident	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.
Cyber security	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.
Energy recovery	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.
Government relations	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.
High-risk area	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.

Indigenous peoples	The term indigenous peoples should be understood in accordance to the Convention (No.169) concerning Indigenous and Tribal Peoples in Independent Countries.
“near”	Within 5 kilometres (km) of the boundary of an area of protected conservation status or an endangered species habitat to the location of the entity’s proven and probable reserves.
Operational site	Any location where an integral part of the mining business is performed.
Probable coal/ore reserves	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.
Recycled and remanufactured materials	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.
Reserves	Part of a mineral deposit which could be economically and legally extracted or produced at the time of the reserve determination.
Spills	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.
Tailings	<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>
Waste	Any substance or object which the holder discards or intends or is required to discard.

Appendix B: Application Requirements

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

Application Requirement MIN-1– List of operational sites

AR 0. 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.

ESRS 2-related requirements

Application Requirement related to ESRS 2- GOV4

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 :

- (a) the Supplement on Tin, Tantalum and Tungsten;
- (b) the Supplement on Gold;
- (c) other areas specified in the conflict minerals regulation,

shall also map the core elements from the OECD due diligence guidance for responsible Supply Chains of Minerals from Conflict-Affected and High-Risk areas in addition to the UN Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises mentioned in the agnostic disclosure.

AR 2. The undertaking shall include procurement in its mapping as well as and 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 company 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	

ESRS E1 -related requirements

Application Requirement related to ESRS E1- 5

- AR 3. The disclosure required by Paragraph 19 shall include the total energy consumption in MWh related to an undertaking's upstream and downstream activities broken down as demonstrated by Paragraph 35 of ESRS E1 Climate Change. Where applicable, the undertaking shall disaggregate and disclose separately the non-renewable and renewable energy consumption in MWh.
- AR 4. The disclosure shall be complemented by a narrative on how the undertaking intends to decrease the consumption of energy by upstream and downstream activities from non-renewable energy sources.
- AR 5. This Disclosure Requirement complements Disclosure Requirement E1-5 of ESRS E1 Climate change and captures the energy consumption of the undertaking's upstream and downstream activities related to its operations.
- AR 6. The reporting undertaking shall identify energy consumption outside of the undertaking may be presented using the tabular format provided by AR 31 of ESRS E1 Climate Change.

ESRS E2 -related requirements

Application Requirement MIN 4 -E2 – Nitrogen oxides, sulphur oxides and other significant air emissions

- AR 7. When compiling the information specified in Disclosure MMI-PO-001, the undertaking shall select one of the following approaches for calculating significant air emissions:
- Direct measurement of emissions (such as online analysers).
 - Calculation based on site-specific data.
 - Calculation based on published emission factors.
 - Estimation. If estimations are used due to a lack of default figures, the undertaking shall indicate the basis on which figures were estimated.

Application Requirement MIN 2 -E2 Actions to prevent or mitigate negative impacts from acid mine drainage

- AR 8. Acid Rock Drainage (ARD) is predicted to occur if, based on computer simulations, chemical evaluations, and/ or acid-base accounting, it is biochemically likely that ARD could form at the mine site. ARD is considered to be actively mitigated if the entity is preventing the formation of ARD through methods that include but are not limited to: storing or covering sulphite-bearing minerals to prevent oxidation, flood prevention and mine sealing, mixing of acid buffering materials with acid-producing materials, or chemical treatment of sulfidic wastes (e.g., organic chemicals designed to kill sulphide-oxidising bacteria).

- AR 9. Minerals or business units may include, for example: aluminium, copper, zinc, iron ore, precious metals, or diamonds. ARD may also be referred to as acid-generating seepage or acid mine drainage.
- AR 10. ARD is considered under treatment or remediation, if the acidic water discharged from the mine area is captured and undergoes a wastewater treatment process (active or passive).
- AR 11. 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 12. 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 13. 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.
- AR 14. A mining undertaking's impacts on water also depend on the quantity of local water resources. A large proportion of the world's ore resources are found in areas that are arid or experience water stress (which are regions where the percentage of total water withdrawn is high (40-80%) or extremely high (greater than 80%) in the World Resources Institute's (WRI) Water Risk Atlas tool Aqueduct). In such areas, the sector's activities are likely to increase competition for water. This may exacerbate tensions between, as well as within, sectors or local communities. Droughts, floods, and other extreme weather events due to climate change will likely pose more frequent challenges to water availability and quality in the future.
- AR 15. Mining activities' impacts on water quality can be due to leaching from tailings, failure of tailings facilities, and acid mine drainage containing acidic water and heavy metals. Certain mining methods can involve substantive vegetation clearance and land-use changes, leading to erosion and sediment flows, which together with alterations in water flows can affect water quality and aquatic and terrestrial habitats. Underground operations might also disrupt or contaminate aquifers.
- AR 16. Transportation accidents and related ore spills can contaminate waterways and wetlands with harmful materials, such as arsenic, lead, mercury, and sulphur compounds.

Application Requirement MIN 6 -E2 - Tailings facilities and impoundments

- AR 17. Hazard potential shall be determined by a third party. The three different hazard potential classifications are:
- (a) High hazard potential
 - (b) Significant hazard potential
 - (c) Low hazard potential
- AR 18. 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 19. 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 20. 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 21. 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 22. 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.

ESRS E4 -related requirements

Application Requirement MIN 7 – E4– Operational sites in or near sites with protected conservation status or endangered species habitat

- AR 23. The undertaking shall disclose the percentage and grade (in percentage metal content) of proved reserves that are located in or near high-risk areas.
- (a) The undertaking shall use the definition in Appendix A for classifying reserves as proved and/or probable.
 - (b) The percentage of proved/probable reserves shall be calculated as the amount of proved/probable reserves located in or near areas of high risk divided by the total amount of proved/probable reserves
 - (c) The undertaking shall provide a breakdown of the calculations by grade (in percentage metal content) of proved/probable reserves
 - (d) The undertaking shall, where relevant, provide a breakdown of calculations by mineral or business unit where minerals or business units include, for example: aluminium, copper, zinc, iron ore, platinum group metals, and diamonds.
 - (e) The undertaking shall follow 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 24. The undertaking shall also explain their process of identifying the sites with protected conservation status or endangered species habitat in a way that is easy to understand and replicate.
- AR 25. Reserves are considered to be in areas of protected conservation status if they are located within:
- (a) International Union for Conservation of Nature (IUCN) Protected Areas (categories I-VI)
 - (b) Ramsar Wetlands of International Importance
 - (c) UNESCO World Heritage Sites

- (d) Biosphere Reserves recognized within the framework of UNESCO's Man and the Biosphere (MAB) Programme
- (e) Natura 2000 sites
- (f) Sites that meet the IUCN's definition of a protected area: "A protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values"
- (g) These sites may be listed in the World Database of Protected Areas (WDPA) and mapped on Protected Planet

AR 26. Reserves are considered to be in endangered species habitat if they are in or near areas where IUCN Red List of Threatened Species that are classified as Critically Endangered (CR) or Endangered (EN) are extant.

AR 27. A species is considered extant in an area if it is a resident, present during breeding or non-breeding season, or if it makes use of the area for passage.

AR 28. For the purposes of disclosure, " passage" is defined as all areas of land or water that a migratory species inhabits, stays in temporarily, crosses or overflies at any time on its normal migration route.

AR 29. For the purposes of this disclosure, "near" is defined as within 5 kilometres (km) of the boundary of an area of protected conservation status or an endangered species habitat to the location of the undertaking's proven and probable reserves.

AR 30. 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 31. The undertaking may discuss reserves that are located 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.

ESRS E5 -related requirements

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

AR 32. Relative to paragraph 60 (a), 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
- (c) the scope of the disclosure excludes waste rock and overburde.

AR 33. Relative to paragraph 60 s(a), the amount of mineral processing waste is to be reported as follows. The amount of tailing waste produced is to be reported as follows:

- (a) the amount of total mineral processing waste shall be calculated in metric tons.
- (b) the scope includes tailings waste generated during metals processing(e.g. smelting and refining), such as slags, dusts, sludges, and spent solvents;.

- (c) the scope includes scrap metal, reject coal, used oil, and other solid wastes and excludes gaseous wastes. excludes waste rock and overburden.
- AR 34. The percentage recycled shall be calculated as the weight of waste material that was reused plus the weight recycled or remanufactured (through treatment or processing) by the undertaking plus the amount sent externally for further recycling divided by the total weight of waste material, where:
- AR 35. The scope of recycled and remanufactured products includes primary recycled materials, co-products (outputs of equal value to primary recycled materials), and by-products (outputs of lesser value to primary recycled materials).
- AR 36. Portions of products and materials that are disposed of in landfills are not considered recycled; only the portions of products that are directly incorporated into new products, co-products, or by-products shall be included in the percentage recycled.
- AR 37. Materials sent for further recycling include those materials which are transferred to a third party for the expressed purpose of reuse, recycling, or refurbishment.
- AR 38. Materials incinerated, including for energy recovery, are not considered reused or recycled.

ESRS S1 -related requirements

Application Requirement related to [draft] ESRS S1-13

- AR 39. The average number of hours of health, safety, and emergency response training shall be calculated as: (total qualifying training hours provided by the undertaking) / (total number of employees).

Application Requirement [draft]-S1-14 Social protection

- AR 40. When describing the scope of access to non-occupational medical and healthcare services provided, the undertaking can specify the types of service to which access is facilitated and the types of workers that have access to them.
- AR 41. If the undertaking does not facilitate workers' access to non-occupational medical and healthcare services because it operates in a country where the population already has access to high-quality and accessible services (e.g., through financial or other support), the undertaking can state this in its reported information.
- AR 42. If the undertaking does not facilitate access to non-occupational medical and healthcare services for workers who are not employees because the employer of those workers facilitates their access to these services, the undertaking can state this in its reported information.
- AR 43. Disclosure Requirement S1-14 covers services and programs aimed at addressing major nonwork-related health risks among workers, including both physical and mental health-related risks. Examples of these risks include smoking, drug and alcohol abuse, physical inactivity, unhealthy diets, HIV, and psychosocial factors.
- AR 44. Voluntary health promotion programs and services might 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 45. 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 46. 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 47. When describing how it facilitates workers' access to voluntary health promotion services and programs, the undertaking can explain whether it allows workers to make use of these during paid working hours. The undertaking can also report if these services and programs are available for family members of workers.

Application Requirement MIN 9 -S1- Percentage of security personnel receiving training in undertakings' human rights policies

AR 48. Undertakings in the mining sector may operate in locations and situations of conflict, including, for example, countries characterized by political and social instability. The risk of human rights abuses is heightened in areas of conflict. Conflict can also be caused by the presence of mining activities. It can be triggered by negative environmental impacts; inadequate engagement with stakeholders and indigenous peoples in decision-making processes; uneven distribution of economic benefits or provision of benefits deemed disproportionate to impacts created; and disputes over the use of land and natural resources. The perceived mismanagement of funds at the expense of local interests can also trigger conflict. Such conflicts can heighten the need to use security personnel, thereby increasing the potential for violations of human rights.

AR 49. Security personnel engaged by undertakings in the mining sector or public security directed by the host government may be present to protect undertakings' assets or ensure workers' safety and security. Actions taken by security personnel against local community members, including during protest activities against the development of ore resources or to protect their land and resources, can violate human rights, such as rights to freedom of association and freedom of speech, as well as lead to violence, injuries, or deaths. Security contractors may also be connected to military or paramilitary groups, who may use child soldiers or be involved in grave human rights abuses.

AR 50. Undertakings shall consider whether training is aligned with the Voluntary Principles on Security and Human Rights. Human rights training for security personnel aims at ensuring that force is used only when necessary, and shall clarify the proportional type of force that can be deployed to different types of threats. Training that addresses the protection of vulnerable and marginalised groups, especially women, children and indigenous populations may be disclosed.

ESRS S3 -related requirements***Application Requirement related to ESRS S3-2 - Approach to engage with local communities***

AR 51. When describing its processes for engaging with affected communities and their representatives about actual and potential material impacts on them, following ESRS S3-2, the undertaking shall describe its due diligence practices and procedures with respect to indigenous rights of communities in which it operates or intends to operate. In particular the undertaking shall consider the following:

- (a) Upholding ILO Convention No. 169;
- (b) Use of free, prior, and informed consent (or consultation) processes;
- (c) The establishment of project grievance mechanisms;
- (d) The establishment of formal community agreements;

AR 52. The disclosure shall include due diligence processes employed during all stages of project development (i. e. prior, during, and post).

AR 53. The disclosure shall also include governance mechanisms the company puts in place to ensure that its policies and practices are adhered to throughout all levels of the undertaking.

AR 54. The disclosure shall 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 Requirements related to [draft] ESRS S3-2 Processes for engaging with affected communities about impacts -Closure and post-closure

AR 55. The description of how an undertaking engages with local communities will also include 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 56. 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 activities 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 57. The closure of operational sites and restoring the biodiversity are often summarised in the undertaking's internal papers and memorandums. affected region requires a lot of

preparation. As the operational life of operational sites is expected to 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 shall be considered by the undertaking

- AR 58. Closure and restoration are costly activities. For each operational site the undertaking may annually demonstrate whether its financial provisions are sufficient to cover the expected costs, considering amongst others future price inflation.
- AR 59. The disappearance of an operational site can have profound impacts on the socio-economic environment of local communities (unemployment, people moving out affecting the livability of remaining supporting activities such as local shops, schools, ...). In its disclosures the undertaking shall also disclose any collaborative efforts, projects and programs that are set up to manage the socio-economic impact of closure and restoration plans.
- AR 60. The costs for environmental and socioeconomic aftercare can be significant. Therefore, the undertaking may book a financial provision in its financial statements to account for the payment of those activities related to closure and rehabilitation.
- AR 61. Besides the financial provisioning, the undertaking may also disclose the non-financial provisions that are available to deal with the socio-economic transition of the local community to an environment where they are no longer dependent on the exploitation of the operational site. (including collaborative efforts, projects and programs).

Application Requirement related to [draft] S3–4 Taking action on material impacts, and approaches to mitigating material risks and pursuing material opportunities related to affected communities, and effectiveness of those actions and approaches

- AR 62. When disclosing on paragraph 29 a), b) and c) the undertaking shall consider:
- AR 63. The presence of the mining sector in proximity to indigenous communities can present economic opportunities and benefits for indigenous peoples through employment, training, and community development programs as well as co-ownership programs. However, it can also disrupt indigenous peoples' cultural, spiritual, and economic ties to their lands or natural environments, compromise their rights and well-being, and cause displacement. It can have further impacts on the availability of and access to water, which is a key concern for many indigenous communities.
- AR 64. The collective and individual rights of indigenous peoples are recognised in authoritative international instruments. Indigenous peoples also often have a special legal status in national legislation and can be customary or legal owners of lands to which undertakings in the mining sector are granted use rights by governments. Before initiating development or other activities that could have impacts on lands or resources that indigenous peoples use or own, undertakings are expected to seek free, prior, and informed consent (FPIC) from indigenous peoples. This right is recognized in the United Nations Declaration on the Rights of Indigenous Peoples and allows indigenous peoples to give or withhold consent to a project that may affect them or their territories and to negotiate project conditions.

Application Requirement MIN-10 S3 – Metrics of negative impacts on affected communities

- AR 65. Land and resource rights of local communities and indigenous peoples are a key issue as often mining operations require relocation (voluntary or involuntary) of said groups.
- AR 66. The undertaking shall 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.

AR 67. The undertaking shall consider describing how it assesses whether its approach is in line with the best available standard.

Application Requirements MIN 11 – S3– Operational sites in or near areas of conflict

AR 68. The undertaking shall disclose the percentage and grade (in percentage metal content) of proved reserves that are located in or near high-risk areas.

- (a) The undertaking shall use the definition in Appendix A for classifying reserves as proved and/or probable.
- (b) The percentage of proved/probable reserves shall be calculated as the amount of proved/probable reserves located in or near areas of high risk divided by the total amount of proved/probable reserves
- (c) The undertaking shall provide a breakdown of the calculations by grade (in percentage metal content) of proved/probable reserves
- (d) The undertaking shall, where relevant, provide a breakdown of calculations by mineral or business unit where minerals or business units include, for example: aluminium, copper, zinc, iron ore, platinum group metals, and diamonds.
- (e) The undertaking shall follow 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 69. The undertaking shall also explain their process of identifying the high-risk areas in a way that is easy to understand and replicate.

- (a) In or near areas of conflict

AR 70. 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.

AR 71. 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.

- (a) In or near indigenous land

AR 72. 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.

- (a) In countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index

- AR 73. The undertaking shall use the most current version of Transparency International's Corruption Perception Index to identify the 20 lowest ranking countries.
- AR 74. The 20 lowest numerical ranks shall be used to generate the scope of countries. Due to the fact that multiple countries share many ranks, the scope may include more than 20 countries.
- AR 75. The undertaking shall also discuss operations that are located in countries with low rankings in the index but present low business ethics risks. As well as operations located in countries that do not have one of the 20 lowest rankings in the index, but which present unique or high business ethics risks.

Application Requirements MIN 12 -S3 – Policy to deal with human rights defenders

- AR 76. Human rights defenders play a valuable role in understanding local contexts and human rights risks on the ground. Based on the report “The United Nations Guiding Principles on Business and Human Rights: guidance on ensuring respect for human rights defenders” (2021) the disclosure requires a report of how the undertaking interacts with human rights defenders.
- AR 77. In addition, collecting data on attacks against human rights defenders is important to understand the existing scope of the problem, identify areas of concern and improvement.
- AR 78. The undertakings shall also provide a list of anonymised, disaggregated data on gender and ethnicity of human rights defenders. This list shall be drawn up with the explicit consent of the defenders in a safe and secure manner).

ESRS G1 -related requirements

Application Requirement MIN- 14-G1 – Sales to, support received from and payments made to governments

- AR 79. When reporting in accordance to paragraph 96 a) the undertaking shall include:
- (a) volumes and types of minerals purchased,
 - (b) full names of the buying undertaking(s) and the recipient of the payment,
 - (c) payments made for the purchase.
- AR 80. When reporting in accordance to paragraph 96 d) the undertaking shall include the following revenue streams in the breakdown:
- (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;
 - (g) Any other significant payments and material benefits to government.
- AR 81. 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. When reporting in accordance to paragraph 96 e) shall include:

- (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.

Application Requirement MIN - 16 – G1 – Suppliers assessed for social impacts

AR 82. Compared to employees, workers employed by suppliers commonly have less favourable employment conditions, lower remuneration, less training, higher accident rates, and less job security. They often lack social protection and access to grievance mechanisms. Workers beyond the first tiers of business relationships in undertaking's supply chain may also be subject to low standards for working conditions, exposing undertakings in the mining sector to human rights violations through their business relationships.

AR 83. Employment terms can vary between local workers, migrant workers, and contractors. Remuneration for these groups of workers may be unequal, and benefits, such as bonuses, housing allowances, and private insurance plans, may only be offered to expatriate employees. Lack of relevant skills, knowledge, or accessible training programs can also restrict local communities from accessing employment opportunities created by the mining sector.

Appendix C: Sustainability Matters

This Appendix presents a description of the sustainability matters that are material for undertakings in the Mining sector. It has the same authority of the main body of the standard and of Appendix B.

Sustainability Matters: Descriptions

E1: Climate change adaptation

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.

E1: Energy

Mining operations are energy-intensive and generate significant direct greenhouse gas (GHG) or CO₂e emissions, including carbon dioxide from fuel use during mining, ore processing, and smelting activities. It 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 CO₂e 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.

E2: Pollution of Air

Non-greenhouse gas (GHG) air emissions from the Metals & Mining 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.

E2: Pollution of Water

Mining and metals production can impact both the availability and the quality of local water resources. Metals and mining 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. 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 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 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.

E2: Substances of concern

Mining 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.

E2: Industrial hazards

The mining industry presents several hazards which companies 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 spillovers), along with related remedial actions for workers, communities and the environment. Appropriate tailings management plays an important role in deminimising the risk for industrial hazards occurring.

E2: Pollution of living organisms and food resources

Common 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 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 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 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.

E3: Habitat degradation and intensity of pressure on marine resources

Mining activity 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 costal 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 rock 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. Metals and 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.

E4: Direct impact drivers of biodiversity loss

Mining operations make substantial impacts on the earth and nature around them. Operation not only pollute and contribute to climate change, it is a direct exploitation of the land and changes the use of the land. This has a severe impact on biodiversity in the area of mining operations.

E5: Resources inflows, including resource use

Mining 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, and preventing environmental health and safety risks improves the financial performance of mining operations and helps secure their continued license to operate.

E5: Waste

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 and could affect the stability of active mines in the area. 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.

S1: Working conditions - Own workforce

Mining operations can be both strenuous and dangerous and can therefore lead to a high risk of injuries at the workplace; thus, this sustainability matter covers the disclosure from an organization of policies regarding fair labour and terms of work, Occupational Health and Safety, Community Health and Safety, employment practices, critical incident risk management, employment practices, training, skills and capability, workforce inclusion and diversity, workforce health, wellbeing, and safety. This includes sexual harassment and other gender-related violence. Additionally, in some cases, the areas of extraction of minerals can be in Conflict-Affected or High-Risk Areas. This high risk at the workplace results in this topic also covering security arrangements, asset integrity and critical incident management.

S1: Equal treatment and opportunities for all – Own workforce

The mining industry has traditionally been a male-dominated industry, with few women in the workforce. Ensuring that women and other minorities have equal opportunities is therefore an important aspect of sustainability within the mining industry.

S1: Other work-related rights – Own workforce

Mining operations are often in countries where the enforcement and safeguards for human rights and good working conditions is low, there is therefore a higher risk for poor working conditions, child labour, forced labour and modern slavery. This sustainability matters covers the undertaking's efforts to tackle these risks and practices, and to provide with equal opportunities to all employees. This includes, but is not limited to, the workers' right of freedom of association and collective bargaining. The mining sector has traditionally had a strong presence of trade unions and collective agreements, however, there is a risk that these rights are not enforced in locations where these are not guaranteed in national legislation. Moreover, considering the recent covid-19 pandemic, the topic would also covers pandemic preparedness and the undertaking's response.

S2: Working conditions – Workers in the value chain

Mining operations commonly involve many business relationships from a wide range of suppliers, who may be based in countries where human and workers' rights have poor enforcement rates. This includes in particular artisanal and small-scale mining suppliers who, due to their small scale, don't have the governance structure and protection in place to ensure their rights. This sustainability matter includes the organization's supply chain management and whether it ensures that it is ethical, sustainable, and ensures protection of all their suppliers' rights.

S2: Equal treatment and opportunities for all – Workers in the value chain

The mining industry has traditionally been a male-dominated industry, with few women in the workforce. Ensuring that women and other minorities have equal opportunities is therefore an important aspect of sustainability within the mining industry.

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.

S2: Other work-related rights – Workers in the value chain

Due to the presence of mining operations in countries where the enforcement and safeguarding of human rights is low, there is a higher risk for poor working conditions, child labour, forced labour and modern slavery in the supply chain. This sustainability matter therefore includes the undertaking's efforts to tackle these risks, and to provide equal opportunities to all employees. In addition to this, this particular situation would also apply to the workers' right of freedom of association and collective bargaining. The Mining sector has traditionally had a strong presence of trade unions and collective agreements, however, there is a risk that these rights are not enforced in locations where these are not guaranteed by national legislation. Moreover, considering the recent covid-19 pandemic, the sustainability matter also covers pandemic preparedness and the undertakings response within its value chain.

S3: Communities' economic, social and cultural rights

Mining 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; as well as their impact on the security and potential conflicts in the area.

S3: Communities' civil and political rights

Due to the presence of mining 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 undertakings employees and local communities. This sustainability matter includes, but is not limited to, freedom of expression, freedom of assembly as well as the rights and protection of Human Rights Defenders.

S3: Rights of indigenous communities

Mining 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 his. 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: Information-related impacts for consumers and/or end-users

Undertakings in the mining 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 is it essential for this to be guaranteed in order 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.

ESRS 2: Risk management and internal control processes

Such tools shall be used in the mining and extractive industry to prevent and / or mitigate significant incidents from occurring. (Risk management is viewed as the process of identifying these possible significant incidents to the undertaking and implementing processes to reduce and / or eliminate material impacts.

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 it's employees are expected to conduct themselves give security and guidance in their everyday work. Mining 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 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 sector has a high risk for corruption and bribery events as their value chains are often complex and are 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, the tools used to prevent this from occurring. It also covers the consequences of a breach of policy, potential reprimands for breaches and the whistle blowing systems and protections the undertaking has in place.

G1: Anti-competitive behaviour

Mining operations, along with other extractive industries, operate in locations considered to be CAHRAs, where the enforcement of anti-competitive practices is less likely to occur. As a result undertakings in the industry may take advantage of the lack of enforcement to engage in anti-competitive behaviour in violation of regulation. This sustainability matter includes the regulation enforced in the area in which an organization operates and whether or not there are risks of monopolies and heavy influence by governments in these matters.

G2: Political engagement and lobbying activities

Mining 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 times 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 it's 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.

G2: 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 company'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, companies are able to also provide more granular information on the government revenues collected from each individual extractive project.

Clarity and transparency regarding payments to governments from entities 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 companies to demonstrate the economic contribution they are making in relation to specific projects, and the communities they affect. Where applicable, companies shall disclose the profit-sharing system in place with the local community.

Appendix D:NACE Codes

B.07.10	Mining of iron ores
B.07.21	Mining of uranium and thorium ores
B.07.29	Mining of other non-ferrous metal ores
B.08.11	Quarrying of ornamental and building stone, limestone, gypsum, chalk and slate
B.08.12	Operation of gravel and sand pits
B.08.91	Mining of chemical and fertiliser minerals
B.08.92	Extraction of peat
B.08.93	Extraction of salt
B.08.99	Other mining and quarrying n.e.c.
B.09.90	Support activities for other mining and quarrying