Euromines Position

on the Revision of the Industrial Emissions Directive

Commission proposal to include (non-energy) mining sector

Brussels, 11 July 2022

Summary

On 5 April 2022, the European Commission proposed the inclusion of the (non-energy) mining sector into the scope of the Industrial Emissions Directive (IED) as part of the IED Review.

The European mining sector is already covered by an ambitious and established permitting system ensuring transparent procedures and stakeholder participation. The mining sector is subject to a dense set of European and national environmental and mining legislation ensuring the highest environmental, climate and safety standards. On the other hand, the IED-system is not suitable for the mining sector and its inclusion would have no environmental benefits. The IED-system of Best Available Techniques will not be functional for the variety of mine types, mine operations and specific mining installations. It will only hamper and prolong procedures for obtaining mining permits.

Euromines asks the European Parliament and the Council to amend the Commission's proposal and to exclude the mining sector from the scope of the IED (deletion of Annex I, No. 3.6.).

Euromines represents the European mineral raw materials industry covering more than 42 different metals and minerals and employing 350.000 directly and about four times as many indirectly. Its members mine metals and minerals, which will play an important role in a sustainable transition, and which make the EU´s economy less dependent on raw materials from third countries and thus more resilient to crises.
Within the EU, Member States have sovereign rights over their own natural resources and responsibility for mining and quarrying lies with the Member States within a defined framework of established ownership rights and national, regional, and local regulations – in particular specific mining legislation.

The European Commission has proposed the inclusion of the (non-energy) mining sector into the scope of the Industrial Emissions Directive (IED) as part of a broader revision of the IED published on 5 April 2022 (see Commission´s proposal, Annex I, No.3.6.). Euromines rejects the proposed inclusion of the mining sector in the IED and requests the European Parliament and the Council to amend the Commission's proposal and to exclude the mining sector from the scope of the IED (deletion of Annex I, No. 3.6.).

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The reasons that the mining sector rejects inclusion in the IED are mainly two:

- ⇨ Firstly, the European mining sector is already covered by an ambitious permitting system ensuring transparent procedures and stakeholder participation. The mining sector is subject to a dense set of European and national environmental and mining legislation ensuring the highest environmental, climate and safety standards.
- ⇨ Secondly, the IED is not an appropriate way to regulate emissions with the purpose to lower the environmental impact of the mining sector. The European mining sector is not a homogeneous and linear process industry. Every mine in Europe is designed and operated in a way that is specifically tailored for the unique mineralization and for the local surrounding environment. Thus, it is neither realistic nor environmentally beneficial to implement the system of Best Available Technique since it will not be functional for the obvious variety of mine types and mining operations in the Europe Union.

The arguments brought forward by the Commission are not convincing. Neither the Commission proposal nor the Impact Assessment (SWD (2022) 111 final) contains a conclusive justification for including (non-energy) mining in the IED:

1. Mining activities are already strongly regulated by EU legislation

Mining activities can, if not properly regulated and managed like any other industrial activity cause negative impacts on the environment and human health. Therefore, regarding environmental requirements, the European mining sector is already today strongly regulated by a dense regulation system on the European level as well as on the national level ensuring a very high level of environmental protection and performance. That way, numerous EU Environmental Directives (e.g. 92/43/EEC, 2000/60/EC, 2004/35/CE, 2008/50/EC, 2008/56/EC, 2008/98/EC, 2008/105/EC, 2009/147/EC, 2014/52/EC) are applicable for mining and quarrying as well as national environmental legislation, international management standards and best practice guidelines.

Potential impacts of mining on the environment are for instance impacts on biodiversity and soils by surface mining, impacts on groundwater by dewatering measures, impacts on air quality due to diffuse dust generation, impacts to soil, water, and air due to management of extractive waste in facilities and wastewater management. These impacts are nevertheless already regulated by European legislation.

Regarding the impact on biodiversity, important parts are already covered by the Natura 2000 legislation and the Species and Habitats Directive. However, most impacts on biodiversity are not caused by emissions but by the land use required for the mining activities, so these impacts could not be integrated in the IED that is tailored to industrial emissions. Impacts on biodiversity by mining are very local and comparably small. On a European scale mining relatively covers a very small fraction of land (less than 0,016% of EU's surfaces, EEA Report No 10/2017 "Landscapes in transition - An account of 25 years of land cover change in Europe 2017").

It is common practise biodiversity, including soils, is protected and/or restored as much as possible during all mining phases. When soil needs to be removed for mining activities, the soil is stored and reused for rehabilitation in later phases during the mining cycle. Soil is already protected by national legislation before, during and after mining operations. Every Environmental Impact Assessment study for a new mining project also

covers the investigation of soils at and near the project. At the EU level the Environmental Liability Directive also protects EU soils.

Potential water impacts are regulated by Water Framework Directive and its Daughter Directives (i.e. Groundwater and EQS Directive).

Air quality is protected through EU Air Quality Directives (2008/50/EC together with the fourth daughter Directive 2004/107/EC).

Extractive waste facilities, which might be the most relevant extractive installations from an environmental point of view, are in addition to the environmental regulations already regulated separately in the specific extractive waste directive (2006/21/EC including the MWEI BREF Best Available Techniques (BAT) Reference Document for Management of Waste from Extractive Industries), tailormade for the management of extractive waste. Additionally, some industrial activities that are relevant from an emission point of view and that are also carried out by mining operators, are already included under the IED, such as power plants, production and processing of metal ore, and processing of ferrous metals.

As mining is already strongly legislated at the EU and national level there is no obvious regulation gap nor any evidence of environmental gain when mining would be included under the IED. In case the Commission would suspect a relevant regulation deficit in this area, a careful and comprehensive examination of the existing legal situation would have to be carried out before taking any further decisions. However, this has obviously not happened. Rather, the Commission seems to be basing itself on incomplete knowledge and assumptions.

2. The inclusion of mining is not justified under emission aspects

The inclusion of mining under the scope of the IED does not seem justified under “emission aspects” either. If one disregards the impacts already regulated by EU environmental legislation (see above under 1)) or those that fall under member states’ responsibility (such as soil), the activities on mining sites already covered under IED itself or Directive 2006/21/EC and the respective MWEI BAT Reference Document, the remaining emissions from mining activities play a rather insignificant role. In Annex I some pollutant emissions (based on publicly available E-PRTR data) in 2020 at EU27 data have been presented for our sector which clearly shows a minor contribution to the total industrial emissions. Annex I also include some brief examples of mine operations and their inherent low emissions.

The EU Commission however justifies the inclusion of non-energy mining in the IED with the argument that it currently would cause significant environmental impacts and harmful emissions. In the IED Review Impact Assessment documents (SWD(2022) 111 final PART 4/5), the EU Commission is mainly basing itself for mining-specific emissions on two JRC studies: A)."Collection of available techniques for the prevention or reduction of environmental impacts in non-energy extractive industries, 2021” and B).“A review of European Union legal provisions on the environmental impact assessment of non-energy minerals extraction projects, 2021”.

A. The first JRC study applied a scoring list considering the aggregated environmental impacts per extractive sub-sector in Europe. However, the scoring was not generated through open interaction with external experts or other stakeholders. Many of the concluded Key Environmental Impact (KEI) scorings

in the report remain a source for different interpretations and therefore should not be seen as a scientific base for making decisions/proposals. For instance, it is not correct to assume that the accumulative impact of activity X is per definition bigger when there will be more mining sites. As an example: open pit mines in the Northern regions of Europe have fewer dust issues than mines in dryer Southern regions. Impacts from one specific dust emitting mine site cannot be extrapolated to dust impacts by other open-pit mines.

B. The JRC explained in the Executive Summary of the second study that in case the study goes beyond the requirements of the Environmental Impact Assessment (EIA) or treats topics that are not covered by the EIA, the explanations and statements shall be understood as nonbinding opinions and recommendations. Moreover, according to the scope of this JRC study (under paragraph 2.2), the document is only focusing on *new* mining projects. Therefore, in our view, the JRC study is not suitable for concluding on emissions of *existing* mining projects.

Besides the JRC studies, the Commission is referring to the Finnish paper „Mining conflicts in the European Union: environmental and political perspectives, Kivinen, et al". The paper is describing historical cases of mine sites that are not in operation today or that currently are fully in line with strict valid environmental legislation and permits. Besides, many of the cases refer to mining types that are not proposed for inclusion under IED (aggregates, coal mining). Therefore, we believe this paper could neither be used as a base for deciding on scope extension.

Although mining is naturally associated with effects on the environment (including interventions in nature, landscape and soil) these impacts are not primarily related to emissions. When considering airborne emissions of PM10, NOx, SOx by mining activities as referred to by the Commission, a considerable part of these originate from the use of vehicles. Nevertheless, vehicles and other mobile machines are not considered as "installations" and don´t fall under the scope of the IED (article 2(3)). Indeed, vehicle emissions are already subject to specific vehicle approval legislation. In addition, exposition of workers to vehicle (and other mobile machines) emissions is regulated by specific (especially occupational safety regulations). Other airborne emissions could be caused by detonations (blasting) in mining operations: however, the emissions conducted via shafts from underground mines or directly from surface mines/quarries cannot be compared with industrially collected emission sources and therefore cannot be mapped by the systematics of the IED. The shaft of a mine, which is among other things used for ventilation, is not comparable to the chimney of any other industrial plant. As part of the ventilation, fresh air is supplied to the active underground mining areas via one or more "inlet" shafts and the used air and emitted gases (e.g. from underground machines and blasting) are discharged via "outlet" shafts. In addition to the fresh air supply, the ventilation also serves to regulate the temperature underground and generally pursues the goal of ensuring safe working conditions underground. Beside ventilation purposes these shafts serve other purposes like hauling up ore and rock salt and the transport of workers and machinery. As far as the emissions that are caused by large combustion plants (e. g. stationary fossil fuel energy generation systems) – as they are also operated by mining companies – those already fall under the scope of the IED according to the current legal situation.

Mining could cause emissions to waterbodies through the discharge of process water or wastewater from extractive waste facilities. These emissions are, however, specifically regulated by EU law as mining waste via EU Directive 2006/21/EC (Directive on the Management of Waste from the Extractive Industries) and the MWEI-BREF. In case other water-specific impacts would occur, they are also already considered in the management

planning of the river basin districts and the measures required to achieve the goals of the EU Water Framework Directive to reduce the water-related impacts of mining are defined in river basin district level. In case of mining activities would have a transboundary effect on waterbodies, this is already covered in the international management plans of the international river basin communities in accordance with the specifications of the EU Water Framework Directive. Furthermore, in some river basins, special management plans have already been issued that cover individual mining branches. Additional regulation of mining in the IED with a view to water protection is, therefore, neither necessary nor would provide any added value for environmental protection.

Altogether it can be concluded that emissions from mining activities either play a subordinated role or fall already under other specific legislation. Therefore, it is neither justified to include mining under emission aspects in the IED nor is it likely that the inclusion of mining under IED would contribute significantly to the reduction of Europe's industry emissions.

3. Mining is a diverse and specific sector

In contrast to installations regulated under the IED, mines and quarries are bound to their geological mineral deposits. Depending on their origin the ores for further processing are naturally unique with different compositions and a wide range of geochemical properties.

Applied techniques and potential impacts on the environment depend on the mined and processed mineral, but also vary strongly within each of these subsectors due to the unique and varying geological, hydrological and climate conditions and location of each mining site. These conditions largely determine the mining, extraction, and processing techniques and – consequently – emissions and volume and composition of extractive wastes. Besides that, it is relevant to consider that since mines are located on natural mineral deposits, the local or regional background levels of certain natural substances in rock, soil and water are often – by their natural characteristics – more elevated. Emissions may be affected by those naturally occurring substances. As a result, mining operations are adapted to the respective local conditions and therefore their techniques differ significantly from each other.

The vastly different operating conditions (geological-, hydrological- and climatological) for mines and for quarries need to be considered and adapted to when setting permitting conditions. That is why IED, being a legislative tool to be commonly applied on a large number of installations, is not an appropriate tool to reduce environmental impact for the extractive industry nor the mining industry. The idea of adopting BAT and BREFs by grouping different types of extractive activities and numerous diversity of ore deposits, without having the possibility to adapt the requirements to the local conditions, may have a severe negative effect on the environment.

The extractive industry is a common definition of widely different operations. As every mine is unique, the extraction methods need to be adjusted to the local conditions. Any attempt to apply the Industrial Emission Directive to extractive industries would probably hamper site-specific technical solutions.

Considering the above mentioned, the IED, which has been developed as an instrument for the regulation of operational techniques, which are highly similar to each other, is not the appropriate instrument for such a diverse sector as mining.

4. Inclusion of mining in IED will not support the domestic mining sector

The Commission stated that digital and green transformation will lead to an increase of raw materials need and that therefore sustainable domestic capacities need to be further developed (IED Review proposal, Part 2/5, Annex 5, Table A5-4). Further, the Commission is *believing* that inclusion under the IED would support this process and in particular lead to better acceptance of (new) mining projects by the general public. The Commission hasn´t delivered any convincing evidence why an IED inclusion would lead to more environmental protection, transparency and better public acceptance of mining.

Some similarities may exist with the dilemma of building new wind turbines: wind turbines contribute to the EU Green Deal objectives; however few citizens would like to see them in their backyard. Inclusion of wind turbines under any other EU Directive will not help change citizen's attitudes. Rather, solutions for acceptance lay in good and transparent communication, interaction, mutual understanding and clear commitments between stakeholders at a local level, and support by political stakeholders.

Therefore, in our view, there is neither a necessity nor an environmental added value to including the mining sector. Also, the IED framework and processes related would not be the appropriate instrument for the mining sector. The extractive sector is already well regulated at the EU and national levels. In general, our sector is constantly innovating to further decrease impacts on the environment and become more sustainable. Besides the EU Green Deal goals, our sector is committed to reaching the UN SDGs.

The European mining sector, in cooperation with European technology suppliers, is world-leading when it comes to the development of mining and processing technology and equipment including BAT. For critical and other raw materials that are essential to reach the aims of the Green Deal, of which some are not mined today in the EU, it must remain possible to assess all proposed mining and quarrying techniques, currently existing or newly developed. A mining BREF could hinder such developments.

Inclusion would only create an administrative burden and would not only make the permit procedures more complex but also risk hampering the environmental and technical performance of the European mines. This could also impede the development of current and new mine projects which are needed for a shift to using more of Europe's available raw extractive resources (https://erma.eu/eu-policy) necessary to reach the aims of the Green Deal and contribute to EU´s resilience.

Euromines asks the European Parliament and the Council to amend the Commission's proposal and to exclude the mining sector from the scope of the IED (deletion of Annex I, No. 3.6.).

It is obvious that two years of COVID-19 and the Russian war against Ukraine have widely disturbed industrial supply chains and set the security of raw materials supply at risk. Against this background, it is not the time to launch a new additional legislative burden for the industry. Under a wider perspective, Euromines would therefore support postponing the further discussion on the IED revision, also because it could hamper the competitiveness of the industry.

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Annex I Examples that contradict the inclusion of mining under IED

⇨ E-PRTR data: total emissions mining vs total emissions in other industries

The mineral sector emissions are reported under E-PRTR. According to the Pollutant releases in Europe by E-PRTR sector in 2020, the release from the minerals industry (open cast and underground mines) in EU27 showed a very minor contribution to total air emissions for pollutants described in E-PRTR, for example CO_2, Sox and PM10. For instance, the E-PRTR database shows that for all 27 MS in the year 2020 the mineral industry air release of CO_2 is 83,86 Mt. The release from the total mineral industry in 2020 accounted for 11,4% of CO_2 released into the air in EU27. The share of release by open cast mining and quarries (including aggregates) of that 11,4% (by total mineral industry) is only 6,1%. This provides a share of 0,70% CO_2 by open cast mining and quarries of the total CO_2 industry release:

Contribution (%) to total industrial emissions per pollutant into air at EU27 during 2020	**Open cast mining and quarries (including aggregates)**	**Underground mines and related operations**
CO_2	0,70%	1,14%
SOx	0,94%	0,54%
PM10	5,90%	0,38%

⇨ Bauxite mining

The bauxite deposits in Greece are of the “karst” type. The largest deposits of bauxite can be found near Delphi, in the Parnassus-Ghiona Mountain range. Most of the bauxite deposits are surrounded by calcareous rocks (limestone). The bauxite production process requires the extraction of limestone (waste rock) mainly for accessing the bauxite. The company’s handling of raw material is limited to limestone and bauxite after the blasting. The mining process of bauxite in Greece takes place completely underground. The raw material, which is extracted from mines, undergoes no special treatment (chemical or thermal). The annual production of bauxite is around 1.100 ktn. The mine operations harmoniously coexist with the Delphi touristic sector and the local communities.

Drainage water in the underground workings is moved internally (not brought to the surface) and there is no dust emission. The SDS definition of bauxite, as raw material, is categorized as a non-hazardous substance. Laboratory data, from sample analysis of backfill waste material (from different mines), with leaching methods, showed that the material is “inert” without any environmental impact. The hazard estimation of extracted waste material is classified as “inert” and in accordance with the relevant National and E.U. regulations.

Therefore, emissions are very small compared to a typical “IED covered factory”. Inclusion of mining under IED and inclusion will have an insignificant effect for the environment or decision-making processes.

⇨ Rock salt mining

Rock salt (NaCl), extracted by mining, belongs to industrial minerals. The related mining-specific emissions of rock salt are very low. The extraction of salt is done underground, mainly by using explosives. The extracted rock salt is hauled above ground and is processed in the rock salt mill by crushing, sieving, and grinding and can then be marketed directly or temporarily stored as de-icing salt or as salt for industrial uses.

Emissions/waste streams from rock salt production:

Solid extractive waste for disposal doesn´t occur. During crushing and grinding, salt powder occurs, which cannot be marketed. This fine fraction will be either backfilled or recovered, e. g. in an evaporation salt plant.

The water consumption is limited, and the production of saline wastewater is negligibly low.

One air emission source is dust from grinding, crushing, and sieving. These processes occur all in-house. For all outlets/installations, dedusting systems are in place. Another source of air emission is related to the combustion plants for heat and steam generation: combustion plants are already regulated under the IED and are not specific installations for the mining sector.

The third source of air emission comes from ventilation shafts. The ventilation shafts emit salt dust (soluble, not hazardous), diesel exhaust fumes (NOx, CO2, CO, SO2), and emissions from explosives (NOx). The concentration in the exhaust air is very low. The reasons, why underground mines/ventilation shafts do not fit under the IED are described in detail above in the position paper.

It is well recognized in several scientific studies, that salt dust does not have any harmful effect on the target organ lung (salt dust is not fibrogenic).

⇨ Magnesium salt extraction

Company Nedmag extracts high-quality magnesium salt (MgCl2) through solution mining from a salt layer under the ground, at approximately 1500 m depth. The production process for their final products combines two sources of different raw materials which are located in Belgium (Dolomite open pit quarry) and in the North of The Netherlands (Magnesium salt solution mining).

At the industrial production site, the production of Dead Burned Magnesia (DBM), calcium chloride, and magnesium hydroxide take place. These (downstream) production processes are already covered under IED.

Effluent from the (upstream) extraction is discharged into the sea according to national permits. Dust generation is negligibly low. Inclusion under IED of the upstream processes will not contribute to any environmental benefit, it will only generate additional administrative and financial burden.

⇨ Low dust emissions levels at Polish copper mines

KGHM Polska Miedź S.A. has three underground copper mines, which extract ore at depths of 600-1200 m. These are: the Lubin Mine, the Rudna Mine and the Polkowice-Sieroszowice Mine.

The processes and operations occurring in the underground activities of the mine are a source of pollutant emissions. The following processes are the main source of pollution:

- Drilling works
- Blasting processes
- Ore extraction and transport
- Operation of mining machinery and equipment

The main pollutants generated in these processes are dust pollutants containing metal compounds and gaseous pollutants in the form of sulphur dioxide, nitrogen oxides, carbon monoxide.

These dust-gas pollutants are emitted into the atmosphere through a system of exhaust shafts, which are the mine's emitters, located in various parts of the mining areas. These shafts represent the only route of emission of pollutants from underground mines to the atmosphere.

Pollutant emissions from exhaust shafts are characterized by very high-volume flow rates of exhaust air streams and relatively low pollutant concentrations. The total flow rate of ventilation air emitted from exhaust shafts is about 28 million m^3 of air per hour under outlet conditions. Dust concentrations do not exceed the level of 0.5 mg/m^3.

Such low concentrations of pollutants mean that the impact of mining activities at KGHM on atmospheric air is imperceptible.

⇨ Difficulties to obtain permits at the early stage of new mine projects, Finnish example

Europe needs more mines for extraction of its strategical raw materials that are needed for the Green Transition. Already at the very beginning of a new mining project it is a very challenging and time-consuming exercise to obtain the permits. Inclusion of mining under the IED will make it only worse and therefore the minerals that Europe is needing, remain locked in European ground.

Phosphate is one of the key raw materials (listed as one of the EU's critical raw materials) to produce fertilizers and therefore to produce food. Finland provides Europe's only running phosphate mine. After Russia's attack on Ukraine, we cannot rely anymore on Russia's phosphate or on Russian energy sources.

To secure the EU's food production, it becomes even more important to have a second source of phosphate in Europe. Recently an environmental permit for another Finnish phosphate project was rejected by the Finnish Court because of the precautionary principle. The phosphate of the reserve has a volcanic origin and is not sedimentary. Because of the geological conditions the cadmium content of this phosphate rock is low and could therefore have been a good alternative for similar Russian low-Cd phosphate.

⇨ Potash mining

In Spain and Germany, the only EU member states with potash mining, mining activities are subject to an extensive permitting system. The same applies to inspections. There are 4 potash plants with underground mining (one of which consists of three sites) and one small plant with solution mining.

The main emission issue of the potash mines is related to the saline wastewater, which is generated during processing and through rain falling on tailings heaps (extractive waste-influenced water). The tailings contain mainly sodium chloride (>90%). Both, extractive waste (tailings) and saline wastewater are regulated at the EU level by the extractive waste directive (2006/21/EC) and the BREF for the management of extractive waste (BREF MWEI). Neither the crude salt nor the basic products nor the mining waste from potash mining are hazardous (according to CLP and Waste Framework Directive).

Sources of air emissions are mainly processing facilities and ventilation shafts. The reasons, why underground mines/ventilation shafts do not fit under the IED are described in detail above in the position paper (under paragraph 2).

In processing, emissions are mainly dust. Moreover, there are emissions from combustion processes (generation of electricity and heat = combustion plants, already falling under the scope of the IED). The dust consists mainly of salt and does not have any harmful effect on the target organ lung (salt dust is not fibrogenic). Besides, all potash plants intensively monitor salt particle deposition around the sides, showing that no negative effects occur.

The crude salt composition of the EU´s four potash plants with underground mining is very different, regarding the potash and magnesium-containing minerals (sylvinite, hard salt and/or carnallitite). This results in different products, different processing techniques and different emissions. E. g. the magnesium-containing minerals “hard salt” and “carnallitite” are only mined on two potash plants. Overall, the 4 potash plants are not comparable to each other.