



Strategic Dialogue on Sustainable Raw Materials for Europe (STRADE)

Promoting Investor Interest in the EU Mining Sector

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List of Abbreviations

Abbreviation	Description
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ASX	Australian Stock Exchange
CES	Corporate Exploration Strategies
DG	Directorate General
EIA	Environmental Impact Assessment
EIP	European Innovation Partnership
EU	European Union
GDP	Gross Domestic Product
IRR	Internal Rate of Return
LSE	London Stock Exchange
OECD	Organisation for Economic Cooperation and Development
PDAC	Prospectors and Developers Association of Canada
RMD	Raw Materials Diplomacy
RMI	Raw Materials Initiative
SIP	Strategic Innovation Participation
SLTO	Social License to Operate
SME	Small and Medium Enterprises
TSX	Toronto Stock Exchange
UK	United Kingdom
USA	United States of America
USD	USA dollar

1. Introduction

The Raw Materials Initiative (2008) aims to enhance the European Union's security of supply of raw materials through access to domestic and international resources and through resource efficiency (including the use of secondary materials). This report focuses on the second pillar of the RMI, namely the sustainable supply of raw materials from within the EU. The challenges in achieving this second pillar of the RMI can be summarised as below.

Domestic mineral production is low compared to domestic consumption. The EU is not a major global producer of raw materials. Mineral production levels for major metals, over the past two decades, have either declined or remained stable and exploration activity is limited, relative to global exploration expenditure. The EU remains dependent on international sources for its mineral needs – however this does not necessarily imply an inability to access raw material supply. Domestic mineral production is not based on an economic necessity but can be considered as a strategic one.

Member state sovereignty. Mineral policy and legislation remain under the sovereignty of individual Member States and mineral promotion essentially remains their prerogative. The EU28 do not share a similar outlook on promoting mining activity within their jurisdictions.

For the Member States that are interested in promoting mining activity, the EU can act as a facilitator. It can promote investor interest, leading to an increase in exploration activity and new mineral resources being brought into production. Such activity, however, should not be confused with the objective of securing mineral supply, but be understood for the contribution it can make to local economies in need of economic assets.

Societal acceptance. In general, there is a negative perception around mining activity within the larger EU community. The issue is often presented as a choice between accepting mining activity or protecting the environment. Social acceptance goes beyond local communities directly impacted by mining activity. Given the relatively small contribution of mining to national and regional economies and employment, the mining sector has limited direct engagement with EU citizens (compared with the automobile sector for example). There also appears to be a disconnect between the importance of minerals as inputs into the manufactured goods that EU citizens consume in their daily lives and where these inputs come from. Such negative social perceptions negatively impact the EU's mining investment attractiveness.

Given this context, the current report focuses on promoting investor interest, by the EU, for Member States that wish to further develop their mineral sectors. The strategy focuses on promoting the strengths of the EU's mining sector and addressing the social acceptance of mining by EU citizens.

The first chapter briefly documents the objectives of an EU mining investment promotion strategy. Chapter 2 presents the state of play – the current exploration, mining and financing profile of the EU in the global mineral sector. It indicates that over the past decade, apart from finance, the EU lags behind in exploration and mineral investment spending. Chapter 3 turns to the factors that influence investor decisions. Chapter 4 analyses specific issues within the EU that contribute to investor risk and lead to low investment levels. Chapter 5 offers a summary and recommendations to promote investment in the EU mining sector.

1.1. Key objectives of a promotional strategy

EU Member States consume 25-30% of the metals produced globally. In contrast, mineral production within the EU represents only about 3% of global production, and many important minerals are not produced in Europe at all. An important related issue is that an increasing volume of materials from which metal could be recycled (for example manufactured goods and scrap material) are being exported to developing countries, rather than the metal being made available domestically.

Fortunately, the overall intensity of metal usage in the EU is slowly decreasing, as it is in other developed countries, and recycling is becoming more efficient and substitute materials are being found. However, European industries, as all industries in a globalised world, will remain vulnerable to possible disruptions in metal supply and to market volatility.

The main objective of encouraging mining investment for interested Member States is to maximize the exploration and development of their mineral assets. Domestic production also represents the procuring responsibly-mined minerals – in contrast to sourcing from regions suffering from armed conflict, human rights abuse and blatant disregard for socio-environmental issues.

Inward investment will also maintain local skills and expertise that will help drive innovation and operating efficiency. As an ancillary benefit, these skills can then be brought to bear on improving mining assets in non-EU countries. In particular, the enhanced skills of European geologists and engineers can be deployed on other continents to help identify suitable mineral deposits and then develop economic operations to extract the metals. Expatriate experts are a particular feature of exploration projects and mine sites in Africa, and also make a significant contribution in Latin America and Asia.

Another supplementary benefit is the support to the EU's mining-technology and service sector. The latter's growth and ability to produce cutting edge technology is deeply entwined with a healthy domestic mining sector. This aspect is discussed in full in STRADE Report (*forthcoming*) on supporting the mining-tech sector.

The promotion strategy to encourage mineral investment in the interested Member States, as discussed in this report, is intended to boost the development of exploration and mineral projects within the EU. This report does not address Member State mineral legislation and regulations that may hinder mining activity. This is based on the premise of allowing market forces to work, increasing interaction between investors and Member States and allowing for appropriate policy responses by Member State governments to evolve.

There are three priority areas for the EU to consider, as below.

Minerals Policy Framework. The improvement of the raw materials framework conditions would foster a stable and competitive supply from EU sources and facilitate public acceptance whilst contributing to increased environmental protection. However, minerals policy and the supply of raw materials fall under the jurisdiction of individual EU countries.

Access to Mineral Potential in the EU. Whether at the national (Member State) or regional level (EU), the production of metals and minerals is ultimately dependent upon the inherent availability of mineable ore deposits, the exploration effort applied and then of the relative attraction of extraction compared with alternative sites. Nothing can be done about the fundamental geological

endowment of the EU countries, but much can be done to enhance the likelihood of finding what is available, and of then making what is found attractive to mine.

Public Awareness, Acceptance and Trust. The social license to operate is an important element of any mineral investment project within most OECD countries. Recent cases in Australia, Canada and some EU Member States would suggest that public awareness and trust may well be more important for investors than the mineral policy and access to mineral potential. STRADE has been unable to identify a coherent strategy being employed to achieve this objective at the EU level.

The European Innovation Partnership on Raw Materials ([EIP-RM](#)) plays an important role in meeting the objectives of the European Commission's flagship initiatives on 'Innovation Union' and 'Resource Efficient Europe'. It is tasked to do this by ensuring the sustainable supply of raw materials to the European economy whilst increasing benefits for society as a whole.

Various activities are described in the Priority Area of the Strategic Implementation Plan (SIP). The aim is to improve the sustainable and safe supply of raw materials to the EU (for its economy and society generally) by the exchange of best practice among EU countries.

One factor of note within the EIP-RM and RMI, is that the research team was unable to identify the extent to which the EU aims to increase domestic mineral production. Key Performance Indicators are not identified, no benchmarks for the production or exploration levels to be achieved are set, neither is the extent of reduction in import dependency outlined. There is the ambition to increase domestic production, but how the achievement or success of this objective will be measured is not clear. Therefore, whilst speaking of promotion of mineral activity within the EU, this report assumes the objective is to increase investor interest, which has been lacking, in the short to medium term.

Distinguishing between EU and Member State initiatives

The promotional strategies recommended in this report are distinguished between those that are country specific and those initiatives that can be incorporated at the EU level. The distinction between the EU as a whole and individual Member States is important. Not all Member States are interested in encouraging inward mining investment, and/or they do not host suitable mineral deposits to appeal to the international exploration and mining community.

STRADE suggests that promotion strategies should only be introduced at the national level for the benefit of those Member States that encourage mining investment. These will include the supply of geological data, making permitting arrangements more straightforward, well-publicized political support for mining investment and clearly-documented financial incentives.

STRADE further recommends that strategies at the regional level should not be prescriptive, and Member States can opt in, or out, as appropriate. Such strategies should include promotion of mining in the EU generally, for example ensuring that legislation in each targeted country is collated in a single document in a clear and consistent fashion, and that Europe-wide supporting services are identified.

The next chapter now turns to documenting the exploration, mining and financial profile of the EU mining sector.

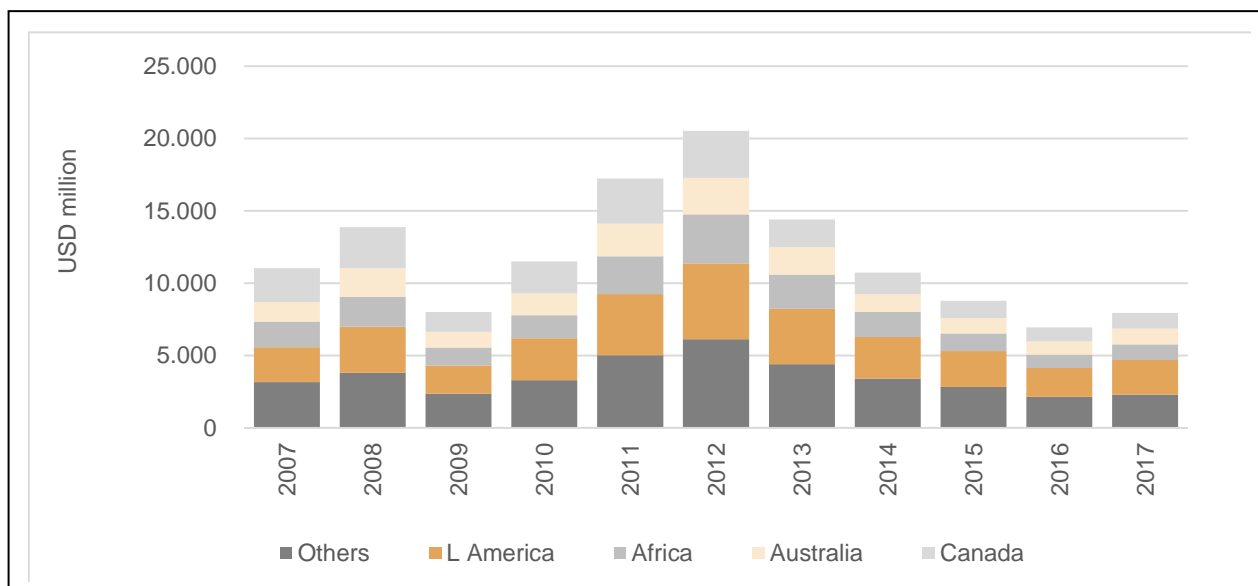
2. EU’s Mineral Sector Profile

This chapter profiles three aspects of the EU mineral sector and the region’s position within the global mining sector. The profile is drafted from a supply perspective, and presents the outline in the exploration, mining and financial sectors. As will be detailed in Chapter 3, a particular region’s strengths and weaknesses are not the only factor driving investment decisions. The initial step in an exploration or mining investment decision is the evaluation of a potential orebody and its financial rate of return. The second step is how the project compares with other potential projects. Therefore, in the analysis below, the report contextualises EU’s position against other potential regions.

2.1. Global comparison of the EU's exploration scene

The exploration effort in Europe (comprising EU and non-EU countries) has waned since its heyday in the 19th century, and the continent has fallen well behind in the global search for metals and minerals. According to S&P Global Market Intelligence's latest Corporate Exploration Strategies (CES) report, the global mining industry's planned spending on exploration in 2017 rose for the first year since 2012. The estimated total of USD 7.95 billion allocated by the 1,535 companies surveyed in 2017 is a 14% increase over 2016 but remains well below the peak of USD 20.53 billion recorded in 2012 (Figure 1).

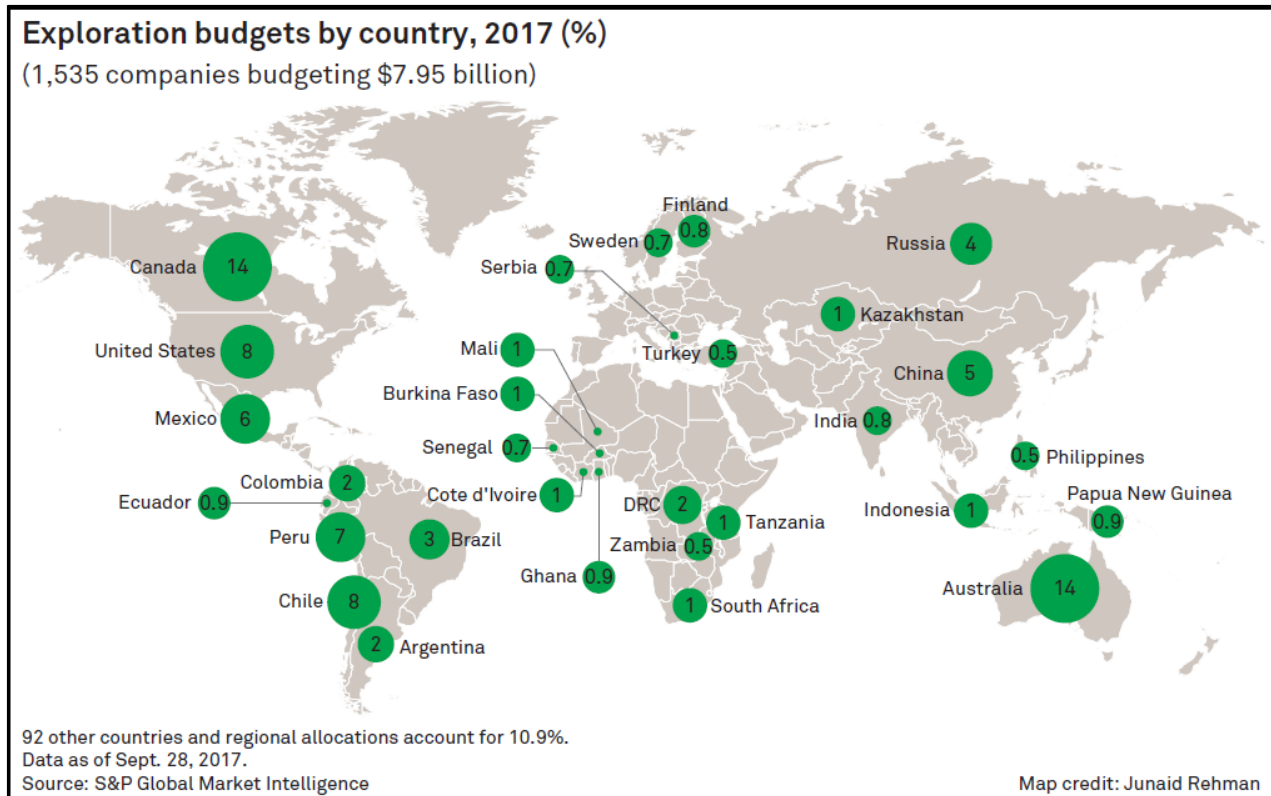
Figure 1 Global non-ferrous exploration budgets (2007-2017)



*The nonferrous exploration budgets covered by S&P Global Market Intelligence include spending for gold, base metals, platinum group metals, diamonds, U3O8 (coverage initiated in 2007), silver, rare earths, potash/phosphate, and many other hard-rock metals. Source: S&P Global Market Intelligence (2018)

On a global basis, Europe barely registers as an exploration destination at the national level, with only four countries appearing in the top-30 rankings in 2017; Finland (receiving 0.8% of the global exploration budget), Sweden and Serbia (0.7% each), and Turkey (0.5%). (Figure 2)

Figure 2 Exploration budgets by country (2017)



2.1.1. By stage

In 2017, the lowest share of exploration budgets was spent on grassroots exploration (work at projects without defined resources, includes sampling, drilling and initial resource calculations), with 27.4% of the total, followed by late stage exploration (36%) and mine-site exploration (37%). Compared with its peak in 2012, the number of companies pursuing greenfield exploration has halved from 1,864 to 894 in 2017. However, the role of grassroots exploration is an important one as it focuses on discovering new deposits and reserves. The long-term mineral pipeline comes from discoveries made under grassroots exploration.

Most grassroots exploration is taking place in Canada (15%) and Australia (13%). EU countries account for less than 4% of such expenditures including Serbia 2%, Finland 1% and Sweden 0.5%. As Table 1 shows, relative to Australia and Canada, the EU’s share across all stages of exploration is small. For early-stage, grassroots exploration, Canada and Australia are significantly more prospector-friendly for metals and minerals than Europe, and many more exploration companies are based in these two countries. This underlying situation will not be changed significantly by promotional activity but the comparative gulf in the percentage allocated domestically by Europe-based companies is a legitimate target for an EU investment strategy.

Table 1 Share of global exploration budgets by stage of development (2017)

	Australia	Canada	EU
Grassroot	13	15	3.5
Late-stage	14	19	1.4
Mine-site	14	8	1.6

Data as of September 2017
Source: S&P Global Market Intelligence

Of the exploration companies tracked by S&P Global Market Intelligence, there were 50 companies headquartered in Canada and Australia that were conducting exploration activity in the EU during 2015. No US-based exploration companies were reported to be active in the EU.

2.1.2. EU-focused exploration expenditure

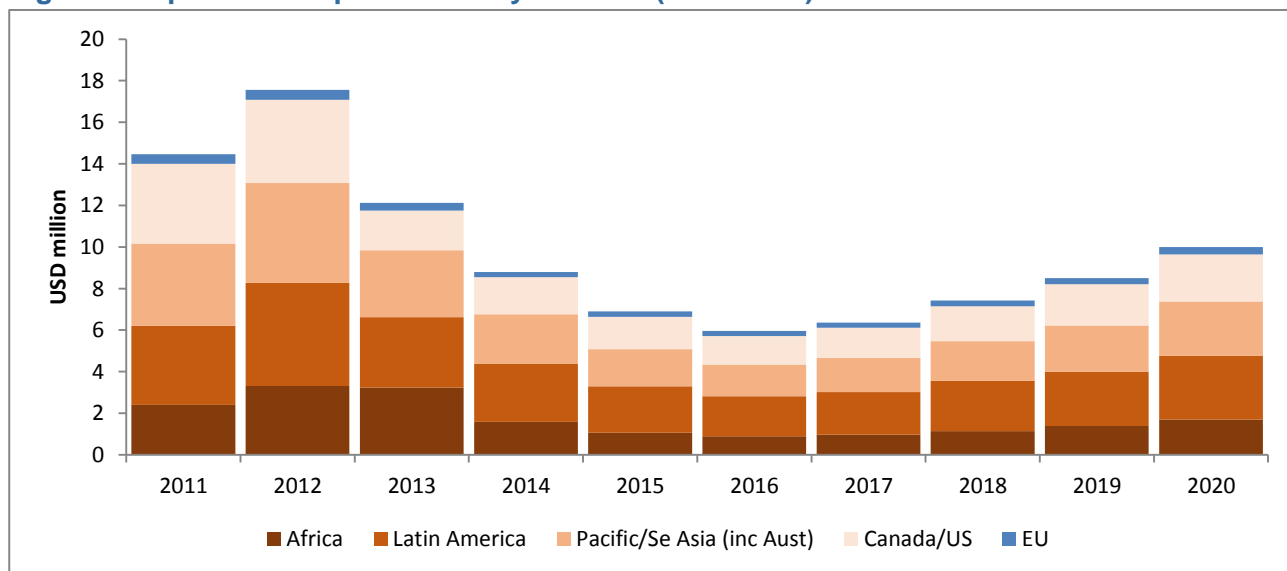
STRADE’s Policy Brief (03/2016) looked at the EU as a destination for exploration expenditure in the future. This analysis covered exploration budgets for six commodities of interest to the STRADE project (copper, gold, iron ore, lead, nickel and zinc) over a five-year period. The forecast was based on expected global GDP growth, reported and inferred exploration expenditure by the mining industry (with emphasis on the juniors), and the expectation of weak metal prices.

For the period 2016-2020, SNL expects Canada¹ and Africa to see the most growth in exploration expenditure budgets at an average of 15% year on year, with Australia close behind at an average of 13%.

EU exploration will grow more cautiously due to the region’s relatively small junior sector – a sector which propels exploration during boom periods. Without change to the EU’s mining regimes structures, including support for the junior explorers, SNL expects the EU’s exploration expenditure to grow at an average of 8% over the period. Nevertheless, this is on par with the Other Areas² region and just ahead of the USA’s 7% average year on year growth (Figure 3).

The EU accounted for 3% of global exploration expenditure in 2017. Like most regions, SNL does not expect the EU’s share to change substantially by 2020. The share of Other Areas region is predicted to decrease from 16% in 2015 to 14% by 2020, and for Canada’s share to increase from 11% to 13%.

Figure 3 Exploration expenditures by location (2011-2020)



¹ SNL treats Canada, Australia and the United States as individual regions due to their robust exploration sectors.

² Other Areas includes non-EU European countries, former Soviet Union countries, Middle East and most of mainland Asia.

Source: S&P Global Market Intelligence (2016)

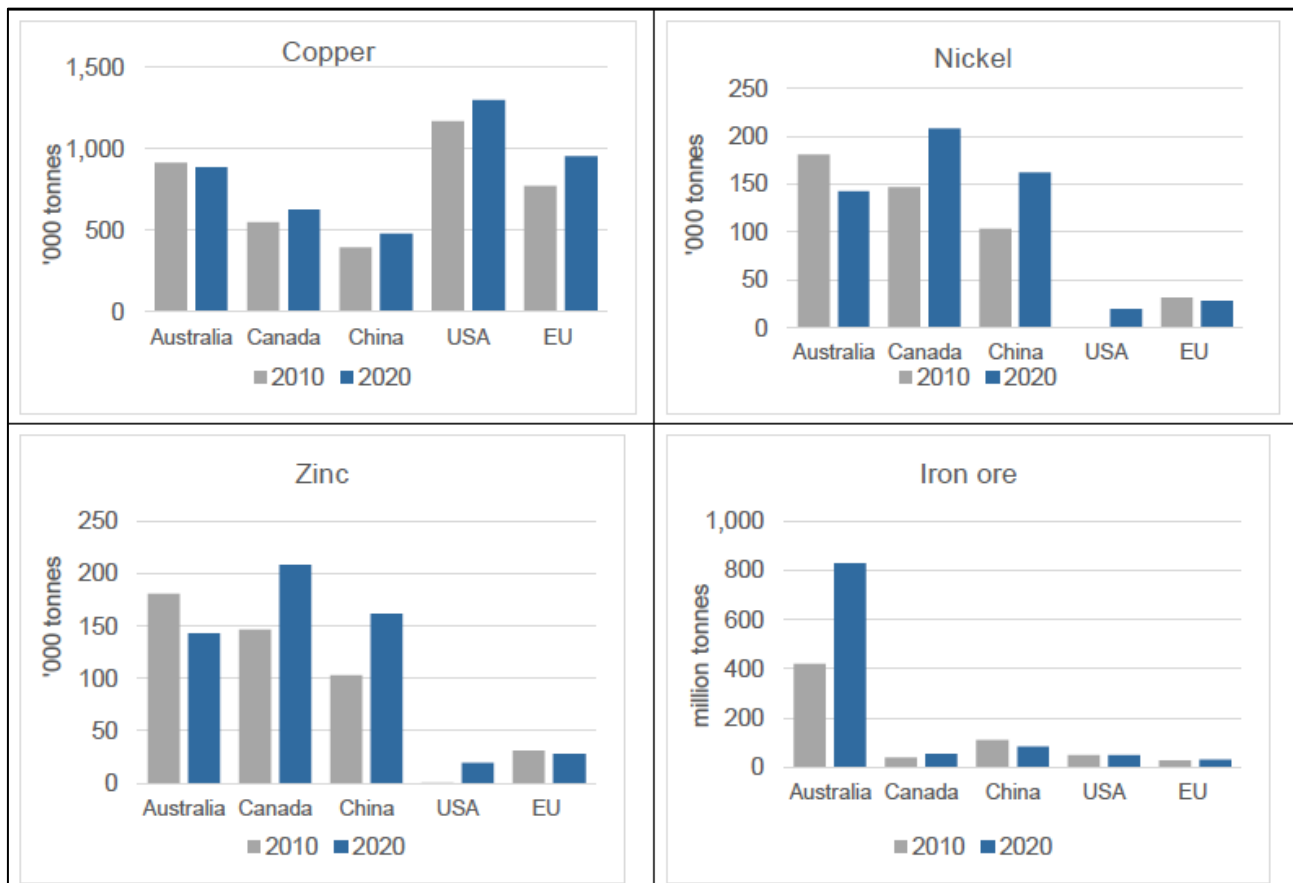
2.2. EU mineral production

In the 1850s, Europe accounted for more than 50% of global mineral production but this share has fallen to under 5%. Comparing EU's mineral production in 2010 to its expected production in 2020, Figure 4 shows a marginal increase is expected only for copper production. In comparable regions, Australian production for iron ore is expected to nearly double over the decade, while Canada and China are expected to have increased their nickel production by 42% and 57%, respectively, between 2010 and 2020.

EU's mineral production is accounted for by a handful of Member States. For example, Poland accounts for 56% of EU's copper production, Sweden accounts for 90% of iron ore production, Greece and Finland each account for near one half of nickel production. Sweden accounts for 43% and Ireland for 32% of lead and zinc production respectively, in the EU.

This production also comes overwhelmingly from single companies in these countries. For example, Poland's copper production is accounted for by KGHM. LKAB accounts for most of the iron ore produced in Sweden. For lead and zinc and nickel, the story is similar – with only one or two companies accounting for more than half of the production in the EU.

Figure 4 EU's mineral production (2010-2020)



Source: S&P Global Market Intelligence

2.3. EU mining finance profile

Financing for most OECD exploration and mining companies are raised through a stock exchange share offering. For the mining sector, the Australian, Toronto and London are the most significant stock exchanges. In recent years, stock exchanges in Asia, particularly Hong Kong and Shanghai, as well as those in Latin America, have become more active. As Figure 5 indicates, while total market capitalisation is similar across all exchanges, there are variations by category of company. For example, the Toronto Stock Exchange (TSX) is commonly associated with junior company financing and they account for 23% of the market capitalisation at the TSX.

The London Stock Exchange (LSE) is associated with the major companies – which account for 94% of the market cap.

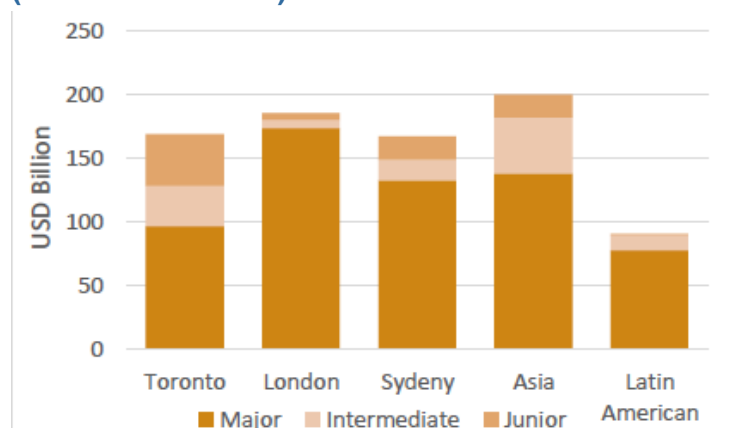
The Australian Stock Exchange (ASX) has an almost equal share for Intermediates and junior companies (around 10%).

Asia and Latin American exchanges (all regional exchanges included) cater mostly to the major companies.

While the LSE still maintains an important position within capital markets for the mining sector, it is no longer the most important one. As Table 2 shows, over the past three quarters, funds have been largely raised on the TSX and the ASX, with the LSE only accounting for 7% of the total.

Of additional concern, the finance raised on the LSE is not directed towards mining activity within the EU. Of the total finance raised, half can be identified by region³. Between 2013 and mid-2017, of the USD 9 billion finance raised that was identifiable by destination, only 11% was directed towards spending in Europe (which includes Russia).

Figure 5 Market capitalisation by company category (USD million - 2016)



Does not include 'other' category of companies.

Source: S&P Global Market Intelligence (October, 2016).

Table 2 Total quarterly fund raising (USD million)

Primary exchange	Q2 2017	Q1 2017	Q2 2016
TSX	2,325	3,804	3,065
ASX	1,974	634	989
London	914	1,078	178
Others	7,039	4,057	3,499
Total	12,251	9,572	8,271

Table 3 Domestic allocation of exploration expenditure (2016)

Location of Headquarter	Total budget (USD M)	Allocated domestically (%)
Canada	2,793	35
Australia	1417	56
USA	502	42
China	734	70
Japan	148	5
EU	816	13

Source: S&P Global Market Intelligence

³ Companies will have multiple projects in different regions and do not always report on where the capital raised is destined for. S&P Global Market Intelligence is able to identify destination for roughly half of the total finance raised in a quarter.

STRADE's policy brief [03/2016](#) also indicated a similar situation for exploration expenditures, where EU base companies allocated only 13% of their budgets domestically (Table 3).

The impact of the expected departure of the UK from the EU on the capital raising for the mining sector is difficult to predict. Traditionally, the other major EU exchanges (Frankfurt and Paris) have not been used to raise capital for the mining sector. The financial and regulatory relationship between the UK and EU after 2019 remains unclear. While the LSE's decline as a major exchange for fund raising for mining projects may be a reflection of the mining cycle, with the UK's departure, the EU has no alternative for raising mining risk capital. This can be a factor in Europe's weak exploration performance.

3. Competing as a Destination for Mining Investment

Mining is a global sector, and there are myriad influences on the choice of investment projects. Because the 'home' country's operating environment and risks are well understood, domestic production is often attractive to mining companies. However, such investment is not necessarily the most cost-effective, or the available deposits might not yield the required ore grades or types of mineral.

International exploration and mining companies have a wide range of countries in which they can choose to invest, and they will prioritise the development of individual assets within their portfolios based on project returns and risk assessments. In theory, the ranking of the initial exploration choice is primarily based on mineral potential, the ease of gaining the necessary licenses and of operating within that country.

In this chapter, the report outlines the factors affecting mining investment decisions. For the EU to act as facilitator for promoting individual Member States, it is important to understand the considerations that go into such investments. Such understanding can assist the Economic Commission in devising promotional activities. Ultimately, it is up to Member State governments to translate investor interest into investor commitment.

The go-ahead on mining investments will be based on the project's economic viability, usually assessed on its internal rate of return (IRR). The IRR is, in turn, impacted by the quality and size of the orebody, the operational costs of extracting the metal, transportation costs, and royalty and tax rates. This financial return will be balanced against specific project risk, and the more general geographic and political risk of operating in that location. A detailed discussion of these issues is presented in STRADE's Policy Brief ([05/2017](#)) on 'Attracting Mineral Investors'.

Sentiment also plays an important, albeit much more intangible, role in this decision-making process. Sentiment is influenced by personal experience and the perception, true or otherwise, of the risks faced within the various operating environments. Such considerations would include the state of the mineral regulation/legislation, the ability to receive licenses, security of tenure and mining rights, government support and public attitudes towards mining.

3.1. Factors affecting mining investment

The decision to invest in a mining project is driven by a number of factors. Given the large amount of capital required and the long-term nature of such investments, these commitments are not undertaken lightly.

Geology and topography will determine the shape and size of a mining operation, whilst economics determine the viability of a project. Even a large, high-grade, deposit will remain undeveloped if the projected return on investment is deemed unattractive by investors.

Capital costs are positively correlated with the size of the operation, whereas the operating cost of extracting a unit of metal/coal will depend upon the mining method and may be lower for large-scale operations (due to economies of scale). For low-grade deposits, small increases in the capital and/or operating costs can render the venture uneconomic.

Elements informing this decision can be classified as those ‘internal’ and ‘external’ to the company (Figure 6). Internal elements are those over which the company and investors have some degree of control, can plan for and design appropriate strategies to deal with. These would include the scale of operation, type of equipment to be used, mining and processing techniques, and the management team. By choosing to operate in a particular country, companies accept the taxation and trade regime as predictable.

Other factors are external, over which the mining company can exert little control. These would include the international price of the metal/commodity produced, transport and fuel costs, state of financial markets (sources of capital). The risk for mining investments is the highest from these categories.

Figure 6 Challenges facing the mining investors and operators in the EU

Internal	Predictable/Controllable		External
	<ul style="list-style-type: none"> • Mine design • Equipment selection • Labour productivity • Management team • Water & energy consumption • Emissions & waste management • Utilization of by-products & replacement materials • Automation • Health & safety issues & culture 	<ul style="list-style-type: none"> • Permits & licenses • Transport charges • Inflation • Finance raising • Availability of local aggregates supply • Competing forms of land use & access • Recruitment of skilled labour • Use of rehabilitated sites after mine closure 	
	<ul style="list-style-type: none"> • Ore grade/geology • Exploration & beneficiation technologies • Mine grades and mine shaft depth 	<ul style="list-style-type: none"> • Fuel costs • Metal prices • Local community reaction • Legal challenges • Volatile demand for minerals • Complexity of permitting procedure • Length of permitting processes • Public acceptability & perception of the industry 	
Unpredictable/Uncontrollable			

Source: SNL Metals & Mining

An 'unexpected' or 'unpredictable' element in any investment decision-making process increases the level of risk that investors ascribe to a project. Increased risk can have numerous effects:

- Investors will require a higher rate of return to compensate for the higher risk the project faces.
- To achieve investor returns more rapidly, the life of the mining operations may be shortened by extracting only the higher-grade and more profitable ore.
- Investors may withdraw from the project completely and pursue other, less risky projects, in other countries. When higher risk perceptions become widespread in a given country, it becomes less attractive as an investment destination.

These unpredictable elements, external to the mining company, are essentially related to third-parties or the global economy. The larger the number of factors in the external/unpredictable quadrant, the greater is investment risk. When factors move across quadrants, for example where the mine-permitting regime becomes unpredictable, the risk profile for the project will increase and have an impact on investment decisions.

Consider the process for receiving permits and licenses for a mine. Companies can facilitate the process, by providing the required information in a timely manner, cooperating with state agencies, communicating with local communities. They can allow reasonable periods within the project schedule for the approval of these permits.

However, the final decision rests with third-parties, often state agencies. When permitting processes become excessively long or unpredictable, they can lead to unexpected incremental costs, which have a serious impact on the economic viability of a project. This does not suggest such regulations need to be 'lax' – only that the rules need to be clearly laid out and mining companies and governments alike adhere to them.

Some of the external factors that influence investment decisions can be grouped as follows below.

Environmental and social regulations. The perception of environmental and social regulations, and of how these may impact the permitting and production timeline, is a clear issue for investors. Mining companies typically want social and environment regulations that are clear as this will reduce project risk and the threat of arbitration. This does not suggest these regulations should not be stringent, just that they are clearly articulated and implemented.

Governance. Governance can be distinguished from legislation/regulations, it focuses on the implementation of the latter. A jurisdiction with a strong governance record (i.e. adherence to its own laws) indicates that although the mining company may have to operate within strict regulations, governance structures and decision making will be transparent and therefore navigable. Stronger governance will lower corporate risk of being exposed to corruption.

Certainty and stability. Mining companies are not generally concerned about 'strong' regulations, provided they are consistent. Uncertainty is the main threat to positive investment decisions, and mining companies look for assurance that the framework will not change abruptly (even in the event of a change in government).

The minerals sector, whether within the EU or globally, faces numerous challenges, as laid out in Figure 6. While this is not an exhaustive list, it does categorise, from the viewpoint of an investor/mining company, the factors that are predictable and within their internal control and those that are unpredictable or external to the company. The latter increases the risk profile for any



project. It is also the area where governments and the EU can do the most to reduce risks and thereby promote the attractiveness of the region as a destination for mining investment.

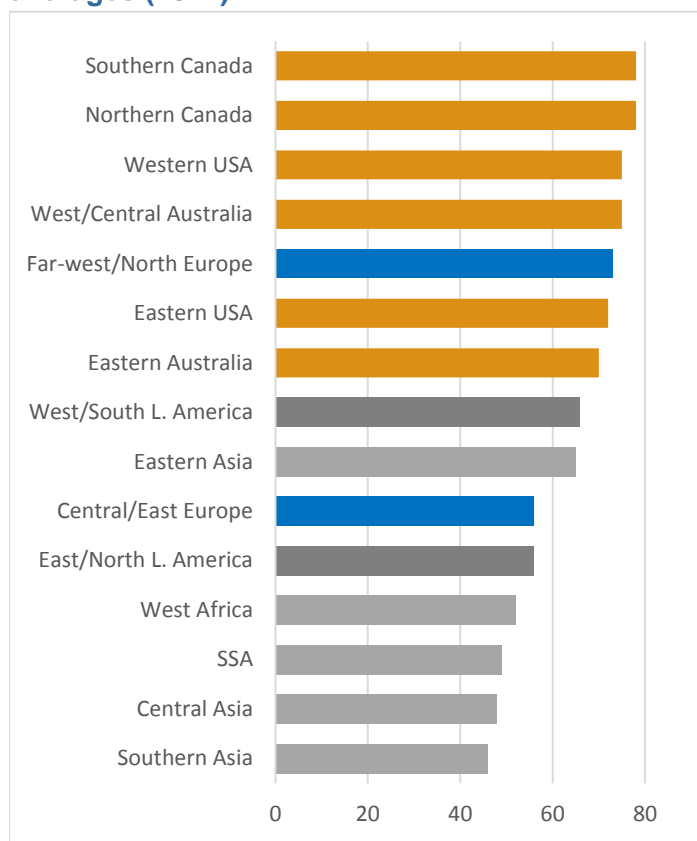
3.2. Mining investment risks in EU jurisdictions

Regional considerations taken into account by investors in the metals and mining sector include geological potential and the operating environment. STRADE’s Policy Brief [05/2017](#) noted that the combination of geological potential and the operating environment determine the mineral investment competitiveness of a jurisdiction. How the jurisdiction compares with other countries will influence a nation’s ability to attract international mining investment.

Mark Cutifani, Chief Executive of Anglo American, one of the largest global mining companies, comments on mining investment risks as follows⁴

Risk management has always been one of the fundamental considerations for mining companies to ensure safe, responsible and sustainable operations. As physical risks evolve with scaling up of operations or with increasing technical and social complexity, so do a wider range of risks become more prominent. This evolving risk dynamic demands specific management strategies to minimise the potential for uncertain outcomes. It doesn’t matter if you are a major mining house or a junior developing your first operation, risk identification and management must be core to your management processes

Figure 7 Investment Risk Index, sub-regional averages (2017)



Source: World Risk Report (2017), Mining Journal

Risk to mining investments can come for a number of sectors and various risk indices have been constructed to reflect these risks. The World Risk Report (Figure 7) uses legal, governance, social, fiscal and infrastructure risks to assign a ‘rating’ to mining jurisdictions. As expected, Canada and Australia feature in the regions with the least risk. Western and North Europe (Finland, Ireland, Portugal, Spain, Sweden, UK) also receive some positive scores. Central and East Europe, however are rated as more riskier jurisdictions. These include Bulgaria, Germany, Greece, Greenland, Italy, Poland, Russia and Serbia.

⁴ http://www.mining-journal.com/digital_assets/cef6461e-2984-41b3-8ce1-c11729429499/World-Risk-Report-2017-Executive-Summary.pdf

A previous STRADE Report ([01/2017](#)) assessed two essential drivers of EU mining competitiveness: the cost of operations, and the mineral legislation and regulation that governs the mining sector in a country. For both these drivers, the EU's performance is benchmarked against other countries.

The analysis on operating costs argues that Member States are not unduly hindered by the cost of wages, electricity, royalty and taxation and other mine-site costs. In fact, for copper, gold and zinc/lead they are relatively competitive on the global benchmark. However, in the case of mineral regulations, most Member States are rated poorly relative to their competitors in Australia and Canada.

Finding and developing a resource to full production is a high-risk, capital-intensive activity. It can span many years and requires patient investors. At the exploration stage, particularly for 'greenfield' projects (ie those in areas where metals and minerals have not previously been developed), the geological potential and access to relevant data are key considerations.

Almost on a par with geological potential is the legal and regulatory regime of a country. Exploration is mostly conducted by 'junior' companies, and they are more likely to invest in jurisdictions where:

- They believe there is the potential of identifying an economically-viable project, and
- Where they are likely to be able to develop their discovery (or sell it to a mining company).

Within the regulations, one of the fundamental determinants of investment activity is the security of tenure and securing the right to mine. The more complicated the process in securing these rights, the less interest from potential exploration and mining companies.

3.3. Key challenge I: Access to geological data and quality of data

Exploration activity can be divided into distinct phases, each requiring a more detailed level of geological information. Even before exploration starts, a company should have identified the country's mineral prospectivity (through regional airborne surveys, geochemistry and geological surveys) as well as have conducted a mineral resource assessment (regional data integration etc).

Based on this general information, the first step for an exploration or mining company is local level prospecting or reconnaissance. Companies gain access to a license area, conduct visual inspection, and carry out non-intrusive measurements. A company may take rock samples for analysis.

If an area of interest has been identified, a company moves to the exploration stage, where intensive exploration activities are undertaken. These require surface rights, through licensing, and includes removing material for sampling, assay and metallurgical testing, drilling, trenching and other intrusive activities.

For a company to be interested in conducting this activity it will first have undertaken an overview of the occurrence of primary resources and meta-level details. The EuroGeoSurveys' [European Geological Data Infrastructure](#) provides most of this information and individual country geoportal webpages also provide in-depth data. With advances in technology, even Google Maps can provide this level of information.

However, this data itself is not enough. Locations of operating and historic mines and primary and by-product metals production data is useful. Geological maps must include overlays for both regional and local details. Key data that exploration companies seek is geolocation data attached to each project and digitised geological maps is considered best practice.

Mining rights management system. A centralised database, which focuses on exploration results rather than operating assets, is ideal. This should include the drilling results and assays for greenfield projects, even if these ventures did not proceed to mining operations.

It should be noted that Europe is not lacking exploration activity because of a paucity of information; it must be one of the most surveyed parts of the world. Making this data accessible is the key.

Access to ownership and detailed information on licences through the management system is required. Rules and regulations under the mining code and other appropriate legislation should be provided, preferably with links to the appropriate ministries.

In emerging mining jurisdictions, as well as in Australia and in Canada, access to geological data is provided increasingly through a Mineral Rights Management system: A Mining Cadastre. Such a system will usually include the following information⁵:

- Formally captures applications for various types of mineral licenses (that is, prospecting, exploration, mine development)
- Registers changes and updates to mineral titles any time a title is granted or an owner changed
- Checks license applications for possible overlaps with earlier claims or other impediments
- Advises the granting authority on whether a license application is technically admissible or not
- Ensures compliance with payment of fees and other requirements to keep a mining title valid
- Advises the granting authority when mining titles should be cancelled.

A Mining Rights Management System can hold a number of differing functions⁶ (see Box 2). The STRADE team is unable to research in detail each Member State's current mineral rights management system. However, a cursory examination indicates these systems are not up to the mark for most Member States. This is in sharp



⁵ [Mineral Rights Cadasters](#), World Bank (2009)

⁶ For example, Guinea's mining cadastre (Guinee.cadastreminier.org/en) provides details of licenses held in the country. More complex online system is also available from commercial organisations.

contrast to developing and emerging resource-rich countries, which often (through development assistance funding from the EU), have state of the art online cadastre systems already functioning.

3.4. Key challenge II: Right to mine and security of tenure

Mining rights refers to all permissions needed to proceed with exploration and mining activity, such as access to land and environmental permits⁷. A 'good' regulatory regime follows a rules-based system, where the parameters for the governments' decisions are clearly laid out for all parties to understand. Such a system implies that while the government remains the final authority for all decisions, the basis for these decisions are made as transparent as possible. Discretionary decision making remains limited.

Such a system would award mining rights to a company when it makes a discovery of mineral resources, given that all conditions listed within the regulations are met. This would also include a process for Environmental Impact Assessments (EIA) that is clearly defined, has clear time-lines and is based on objective markers for decisions. The exploration or mining company is aware of these conditions from the very start of the process.

Discretionary decision making, where the investor is not aware for the basis of decisions increases the risk profile of a project. For example, mining legislation that refers to granting of rights based on 'if the company is considered appropriate', without detailing what are the appropriate technical and financial considerations is not considered as good regulation. Risks are further compounded when the EIA process does not present clear standards, and the timelines are open-ended. Again, this is not to suggest the EIA process should be hurried, but that the regulations should provide guidance on what these timelines may be.

Legislative issues relating to mining within the EU are both local and national in nature and vary from country to country. In a previous STRADE Report ([01/2017](#)), 13 Member States were evaluated (the selected countries account for the majority of the EU's mineral production of major metals) and compared with legal regimes in Australia and Canada. The analysis indicated that several EU countries fail to observe the most fundamental principles of good mineral regulations: namely the right to mine.

The right to mine may be considered as encompassing three stages. First, the right to an exploration license on a first-come first served basis. Second, the right to convert the exploration license to a mining license and third the right to sell the mining rights to another party. The granting of these rights does not imply that at any point the investing entity may disregard all financial, environmental and other permitting requirements set by the country.

The underlying principle behind the right to mine is this: the entity that makes the investment in discovering a viable deposit must also be allowed to benefit from mining it, otherwise there would be little to be gained by investing in exploration. The entity may choose to transfer the right to another party. This right should be provided under a clear, rules-based system and should not face undue interference or limitations from authorities where the decision-making criteria are not clearly laid out.

⁷ Criteria for Mining Rights: If an environmental permit is required before a mining licence can be granted, this does not impact the right to mine as long as the right to mine was guaranteed to the exploration company.



3.4.1. Exploration – first-come, first-served principle

Many EU countries do not observe the "first-come, first-served" principle when it comes to the granting of exploration licenses. The rule is considered best practice as it increases transparency and supports competition. The principle works on the basis of the first company to make an application, having met all the criteria laid out in regulations, has the right to be granted an exploration license. Alternative systems include public tenders; however, these are more complicated and may not always achieve desired results. For tenders to be successful, more than one party needs to be interested in the specific area. If more than one applicant cannot be found, which is likely to happen in Europe where many exploration companies do not operate, the entire purpose of the tender is defeated. Moreover, tenders can also introduce an element of corruption unless the tender evaluation process is completely transparent and based on objective criteria.

The argument that tenders allow the government to 'choose' more suitable companies, based on their performance is also flawed. The suitability of a company should be laid out in regulations, under company requirements to operate within a region. The tender process is an unsuitable tool to achieve this aim. Using tenders for such purposes also runs the risk of the license to be awarded to a company that has under-cut its competitors at the initial stage and in the long-run is unable to deliver an efficient operating mine. For these reasons, the first-come, first-served principle is the most appropriate way to achieve competition.

The approach of using tenders is often based on the erroneous assumption that mining investors are captive, since there are very seldom any alternative operators. It introduces uncertainty, which deters investors by making it difficult for exploration companies to raise finance and commit to investments. Moreover, any conditions, particularly as concerns the environment or local communities, should be covered by clear legislation that allows investors to anticipate expenditure as far as possible, and not be subject to negotiation at the time of the award of the mining title.

Consider the case of obtaining the right to mine in **Austria**. Austria's mineral code has well-defined, yet stringent, right to mine clauses. Exploration license are awarded in the order they are received – respecting a first-come, first-served principle. It provides the holder of an exploration license the right to challenge legally the granting of a mining license on the same area to a third party. This allows the exploration company to protect the investment it has made.

As part of the mining license application, the company has to submit geological information, a detailed mine operations plan, mine closure and rehabilitation plans, and demonstrate the use of best available technologies to reduce emissions. A company must also submit financial and technical capacity capability documentations. Requirements for submissions under the EIA are clearly identified and, more importantly include the grounds for refusal of an application. There is a clearly identified time-line for the approval of an EIA process.

In contrast, **Poland** does not follow the first-come, first-served principle for granting exploration licenses. When an application is made, the government issues a public notice to invite other companies to make applications for the same area. The applications are evaluated before a license is awarded. Consider the situation from the perspective of an exploration company; effort and resources have gone into identifying a suitable area for further exploration. Under the Polish rules however, any competitor can be awarded a license for the area the company has studied. Therefore, the company risks losing its investment while another company benefits.

Finland, Greece, Spain and Sweden explicitly recognize the first-come, first-served principle in their mineral legislation. For the Czech Republic and Ireland, the principle is inferred, rather than explicitly stated in the mining act.

Portugal does not explicitly state the first-come first-served principle and will make decisions as applications are submitted or through a tender process. The Federal Mining Act in Germany (1980), provides discretionary authority to approve the exploration that provides the “best plan for efficient and meaningful exploration”. Bulgaria, France, Romania award exploration licenses under a competitive tender.

3.4.2. Converting exploration to mining license

The business model for most exploration companies is to identify, and prove, a viable deposit and then sell the right to mine the deposit to an intermediate or major mining company. Globally, very few exploration companies will conduct mining extraction themselves. In Europe, however, small to medium sized companies may have greater tendency to carry on from exploration to extraction.

Therefore, the largest risk to an exploration company would be the inability to transfer the rights for a viable deposit to a third party. In case the company decides to exploit the deposit itself, the greatest risk is to not have the exclusive right to mine a deposit it has discovered. Again, these transfers/conversions do not imply the exploration company will not meet all financial, environmental and regulatory permitting requirements of the country.

In **Romania**, an exploration company, particularly an international one, submits a final report on its exploration activity. At this time the exploration company can submit an application for converting the exploration license to a mining license. Such a request is to be made within 90 days of the submission of the report and the company will have first priority for award of mining licensee. However, for any reason if the company is unable to make such a request within 90 days, the mining license can be awarded to other companies via a competitive bidding process.

French legislation clearly states that the holder of an exploration license has the first right to a mining license for a particular land parcel. However, the application process undermines this transfer as the application for a mining license is unclear. While the regulations list the documents to evidence the company’s competency be submitted for consideration, they are unclear on how a decision is made. This opacity and lack of a rules-based system therefore implies companies can have their applications rejected, without understanding the basis for such a rejection.

In the case of **Germany** (federal), moving from an exploration license to an exploitation license is more complicated, but is based on clear rules. Under the Federal Mining Act in Germany, an exploration license holder has priority for being granted a production license if applications from other parties are made for the same area. However, a production license itself does not allow mining activity to progress. A company must also apply submit an Operation Plan, and once this is approved mining activity can proceed. The Federal Act lays out clear criterion of the approval or rejection of such plans, which is good practice.

3.4.3. Transfer of mining rights

For large-scale projects, mine life can extend beyond 20 years. The mine operators may change over the life of the mine, and mergers and acquisitions of companies is a regular occurrence. In

other cases, a company may wish to completely divest a mining asset. In the case of the former the changes are in the structure of the company and mining authorities normally need to be only informed of such changes. In the case of the latter, the mining title is transferred to a new owner and therefore requires the right to mine to be transferred to a new entity.

Austria, Bulgaria, Czech Republic, Finland, Romania and Sweden allow the transfer of both exploration and mining licenses, provided the new party fulfils the required technical and financial capacity and other conditions laid under the regulations. **Germany** allows for a transfer of rights to take place with the approval from the correct authorities. Its Federal Mining Act also clearly states why such a transfer can be rejected.

The **French** allow for a transfer of rights, as long as both parties request such authorisation within a three-month period of such a transfer being planned/executed. The ministry retains the right to reject such a transfer if it judges it incompatible with the right to hold a mining title.

Greece allows only for Greek or EU nationals to hold exploration rights. Such rights can be transferred or leased to other parties, subject to the approval of the ministry of industry. The government may reject the application on grounds of 'public interest' or national security, without specifying what such interests entail. The government can also force the compulsory sale of a mining concession if it deems it to be in the interest of the national industry. **Ireland's** legislation does not provide for the transfer of rights and such terms have to be individually negotiated with the ministry during the original mining license application/contract.

3.5. Key challenge III: Perception of mining in the EU

The [World Risk Report](#) (2017) lists 'social license' as the biggest operating risk facing the mining sector today, ranked in equal importance to environmental management. It is also considered as the risk mostly likely to increase in the near future and the most difficult risk to manage. Lack of social acceptance can halt progress for the largest of mineral projects. Such acceptance is inextricably linked to the perception of mining as being the opposite of protecting the environment.

The reasons for this unpopularity are both real and imagined. With regard to the former, the European mining industry has a poor historic record in protecting the environment. It is only in the past 40 years, or so, that the sector has paid proper attention to sustainable extraction of metals and minerals.

Moreover, even the best managed mines and quarries will increase local pollution to some extent (at the very least the noise and inconvenience of extra vehicle movements). The operations are usually visually unattractive, and mines invariably lower the value of nearby properties. Another common grievance is the conflict over usage of scarce land.

Even the most attractive mineral deposit, and sympathetic legislative and fiscal regime, will ultimately prove uneconomic if the project does not have ongoing approval from the local community. Broad social acceptance is crucial if the mine is to gain political approval and the necessary operating permits. This 'social license to operate' (SLO) evolved about 20 years ago from the broader notions of 'corporate social responsibility' and 'social acceptability'. Although intangible, it is a 'license' that must be earned, and maintained, and can be easily lost. The following discussion is based on discussions from STRADE's workshop on Perceptions of Mining in the EU, in [June 2017](#) (Brussels).

The challenges posed by obtaining an SLO are not consistent across the EU. Regions with a long history of mining, including notably parts of northern Scandinavia and Cornwall in the UK, welcome new mining projects and the economic opportunities they bring. Conversely, citizens in the majority of the EU, which is by and large densely populated and has had very little recent exposure to mining, are sceptical of the benefits of a new project in their local area.

International investors are hesitant to invest in EU mining activity due to perceived risk of delays posed by the process of obtaining an SLO in the region. The perception that mining projects in developing resource-rich regions are often faster to come online than an equivalent development in Europe, is common. As a mining company may be one of the largest sources of economic development and employment opportunities, both directly and indirectly, within a developing country, it attracts a great deal of national attention. As a result, mining companies often face less national resistance, and are able to secure instant access to relevant governmental stakeholders within the country. Such access greatly decreases the likelihood of a project facing significant delays in the development process.

Conversely, a mining company operating within the EU is unlikely to be one of the largest employers or sources of economic activity within the region. As a result, such operations do not receive the same national and public support and can often face considerable delays.

This low priority as a source of employment in the EU, compared with other resource-rich developing countries, impacts a mining company's approach in obtaining an SLO. Mining companies must not only show that they are doing no harm but that they are positively contributing to the local area. For some companies, this will require an adjustment in operating practices.

The SLO challenges posed in trying to develop a mine in EU are also demonstrated by the population density of the region. While Africa has an average population density of 39 people per km², the EU has an average population density of 112 people per km². This means that, on average, a mining company developing a project in an EU Member State must engage with, and respond to the concerns of, nearly three times the number of people they would if they were developing a project in Africa.

This may also explain why the need to obtain national acceptance to a mining project is more important within the EU context. National acceptance is often taken as a given in other resource-rich developing countries and therefore encourages investments in these regions instead of investing in Europe.

3.5.1. Opposition to mining companies and operations

Given the well-developed civil society communication networks in most EU Member States, obtaining an SLO in the region requires acceptance at the national level as well as the local level. Mining companies looking to obtain a SLO have often come up against mature and well-organized opposition to mining activity in Europe.

There were varying perspectives on how successful mining companies have been at understanding and securing local community acceptance within the EU. Some participants believed that mining companies have become more efficient at securing local support for their projects and receive few objections or formal grievances.

Others argue that mining companies have historically viewed community support for a project as an afterthought. By waiting to present a fully formed plan, mining companies engage too late with local communities, and thus are not perceived as open minded or responsive to the local cultural and historical context. This can manifest itself in the lack of adequate consideration of indigenous communities and culturally sensitive activities, such as reindeer herding in the Nordic region.

However, there was broad consensus within the STRADE workshop that mining companies are not currently sufficiently addressing the need for national acceptance of mining activity at the EU level. This however should not be considered the responsibility of exploration and mining companies alone. It is a much bigger requirement for a small, lightly capitalised, junior miner than it is for a global miner with deep pockets.

Mining companies, regardless of which commodity they focus on, are perceived in the public in the image associated with coal, i.e. a major polluter of the environment. Fuelled in part by increased focus on climate change issues, mining companies must not only gain the trust of local communities but respond to the concerns of an ever-increasing effective citizen and shareholder activism. This results in a new form of SLO that incorporates a more diverse group of stakeholders within the host country, rather than just engaging with the local community surrounding the mining project.

It was noted at the STRADE workshop that mining companies have not received sufficient support from the EU in addressing these wider national and civil society concerns. In publicly voicing their belief that mining is not needed in the region, EU government officials have undermined mining company efforts to gain the citizen's trust and acceptance of mining activity in the region. A review of tweets from Commissioners and Members of European Parliament during major events, such as the Raw Materials Week, and during parliament debates on mining related issues (such as Mine Waste Directive and Resource Efficiency) would suggest there is a level of cynicism associated with mining activity.

3.5.2. Tools available to address EU's mining perception problem

The workshop also examined tools available to various relevant stakeholders to help address the EU's mining perception problem. In Finland, following the environmental accident in Talvivaara in October 2012, the Finnish government launched the National Action Plan for sustainable mining, out of which the [Finnish Network for Sustainable Mining](#) was developed. This voluntary initiative brings together mining companies and civil society stakeholders, as well as representatives from other livelihoods and local communities with the aim of developing a self-regulated sustainability standard for mining in Finland. The network⁸ has, in its short existence, shown the potential for creating a platform for interaction and trust between the mining sector and key stakeholders in the Finland and developed a tool that could have potential use across the EU.

A second tool discussed at the STRADE workshop was the role of legislation in helping to address and mitigate public acceptance issues for mining activity in the EU. Civil disruption and blockades by the First Nation in Canada show the increased risk to mining companies and the government for not legislating for the involvement of all stakeholders.

⁸ <https://www.kaivosvastuu.fi/toolbox-for-local-actions-available-in-english/>

Legislation should not be viewed as a last resort, but rather framed under the principle that good legislation fuels good social responses. Legislation is a useful tool for governmental stakeholders to demonstrate to vulnerable communities, including indigenous peoples, that their voices will be heard in the engagement process. Legislation establishes a process for communities to participate. A government is obliged under a constellation of norms which, like in the case of environmental and land use regulation, and human rights, have developed over time, often crystallising and implementing constitutional principles. However, governments should be careful of the danger of over regulation dissuading potential investors.

4. Promotional Strategy

This report started with a statement of fact – EU Member States have been unable to attract exploration and mining spending, relative to other jurisdictions.

The low performance was linked to risks facing investors in Member States. Within the EU, these were largely external to mining companies, and therefore carry a high level of uncertainty for exploration and mining companies, relative to risk factors that are internal and expected. Access to geological data, the right to mine and obtaining a social license to operate were the three specific issues that were highlighted.

No mining jurisdiction is perfect – there are always regulatory and social risks associated with operations. The EU Member States do not suffer from insurmountable, fundamental flaws in their legal and regulatory frameworks. Similarly, there are EU mining operations that have gained a social license to operate in recent years.

This chapter develops recommendations to promote mineral investments, given the issues identified, and is not meant to provide recommendations on how to rectify fundamental mineral legislation in Member States. The promotional strategy is meant to improve the perception of investors and communities of the EU mining sector.

The first assumption behind the promotional strategy is the acknowledgement that, unfortunately, the geology of the EU is relatively unlikely to support large low-cost resources, such as those found in Western Australia (for iron ore), in the Andean Cordillera (for copper) or in North Africa (for phosphates). This lack of scale may also be a factor in the EU's relatively low ranking for labour productivity in operating costs. Note, scale is an important issue for major minerals, but that minor metals and industrial minerals do not necessarily require large scale activity.

Nevertheless, the real damage to the performance of the EU Member States in attracting exploration and mining investment seems to centre on the (perceived) external risks associated with the sector. For investors, this perception of risk is influenced by sentiments expressed by public and private actors, including the media (social and formal), active national/regional promotion and the sharing of experiences at conferences etc.

The European region is politically and economically stable, where space for private enterprise and regulations are generally considered to balance the concerns of companies and communities. The disappointing performance in terms of translating these perceptions into increasing exploration budgets and mining investments, however, suggests there is a gap between perception and practical implementation.

The EU Member States are not unduly hindered by the level of operating costs (eg wages, electricity, royalty and taxation). Indeed, for copper, gold and zinc/lead they are relatively competitive on the global benchmark. However, in the case of mineral regulations, most Member States are rated poorly relative to their competitors in Australia and Canada.

Quite apart from the need to secure increased mining investment into the EU, any promotion strategy must take full account of the industry's unattractive image amongst large swathes of the European population.

As part of a promotion strategy to address these issues (ie explain negative impressions and highlight positive attributes), a number of promotion activities can be undertaken at the EU level.

4.1. Pillar I: Highlight comparable advantages

As discussed in this report, mining investors generally have a good perception of the EU Member States for economic policy, labour productivity and skills, infrastructure, and proximity to market. For these issues, the only requirement of a promotion strategy would be regular reminders of these positive features to potential investors.

There are also issues on which mining investors have a poor perception, and for which the EU (either generally and/or amongst its Member States) ranks comparatively badly on a global basis. These issues include mineral prospectivity (ie there is generally less-favourable geology), investor perception, and right to mine.

To highlight the EU's comparable advantages, the following strategies should be undertaken.

Cost competitiveness. EU mining operations compare well on a global basis but there is nevertheless an unfavourable perception that costs are high. These include; operating costs, and taxes and royalties payable. Accordingly, these issues would benefit from aggressive marketing to highlight the comparable advantages, and to correct mistaken perceptions.

Geological maps showing main prospective zones in Europe. As stated earlier, the EU has limited geological potential. This is a perception that can be addressed by making available the geological information within the EU, through providing better and more accessible information and devising a competitive Mining Rights Management System (see below). A series of maps should be made available in several formats to ease exploration investigations by potential investors.

Booths at major mining conferences. A communal booth should be designed and staffed at the leading trade conferences and trade shows, for example Mines & Money (the London event especially), Mining Indaba (Cape Town), Diggers & Dealers (Kalgoorlie) and PDAC (Toronto). This booth would showcase the mineral potential of the individual Member States, and of the EU as a whole. Individual member countries could be offered positions within the booth to promote their respective regions.

The EU's promotional booth at the PDAC conference in March 2018 was a positive step in this direction. The accompanying sessions on EU country profiles, with senior ministers presenting their cases, was also well structured. Such participation should become the norm at future events.

Articles in leading trade publications. To assist in improving investor sentiment towards mining in the EU and its Member States, regular articles should be targeted in the leading trade publications (with the UK's *Mining Journal* and Canada's *Northern Miner* being the prime targets as

these publications are widely read by mining company executives). These articles would ideally focus on local exploration activity and any changes in mining legislation or fiscal regimes.

4.2. Pillar II: Mining rights management and information system

Access to information is a key requirement for increasing investor interest. This requires the collation of such information, through an easy to access online source. This information, ideally be located within a mining rights management system for each Member State, but available through an EU platform. Information should be provided by Member States should ideally include the following.

Template document on securing exploration/mining licenses. Each Member State should have a clear and concise, and ideally comparable, document on 'How to secure exploration/mining licenses'. These would be simply laid out with electronic versions on a communal website, with links to more detailed documentation.

Comprehensive geological maps. A suite of detailed geological/geo-physical maps of all prospective regions should be readily, and freely, available to exploration companies. Ideally, the contact details would be included of a local geologist who could explain regional features and assist in follow-up work.

List of available exploration and mining licenses. A comprehensive list of all exploration and mining licenses should be posted on government websites. The document would contain details of the license (grid references, location map, geology, history of exploration, local issues, current permit holder and expiry date), and be regularly updated (perhaps quarterly).

Details of government personnel. The contact details of all relevant government personnel with a role in facilitating exploration and mining activity within the country should be made available to potential investors.

Details of local service providers and equipment manufacturers. Similarly, the contact details of local service providers (geological consultants, transport coordinators, drilling contractors etc) and equipment manufacturers with operations within the country should be made available to potential investors.

Fiscal benefits. Details of tax advantages, and other government financial benefits, related to extraction of these critical materials ought to be readily available. Ideally, such documents should also be disseminated directly to companies active in the relevant fields.

List of mining-related national news. All Member States that espouse increased mining investment should post on their website regular bulletins (ideally weekly) on national news, especially as it relates to exploration and mining activity. This would include the release of exploration/mining permits, exploration results, changes in fiscal/financial conditions and political/economic news.

One-Stop-Shop. This information should be organised under the EU umbrella, providing the first step of contact for interested investors and exploration and mining companies. Such services can be incorporated under the [EU Investment Policy](#), with the appropriate unit building some level of mining competency to manage basic promotion activities.

The One-Stop-Shop's primary responsibility would be to provide information that is required by investment entities, in the first instance, and to direct them to the appropriate contacts in Member States. The function of the unit could additionally include the following:

Relevant legislation in all EU Member States. A report (updated annually) should be made available that summarizes the metals and mining legislation in all of the EU Member States. This would be an easily-read, and concise, summary of the relevant legislation, with links to more comprehensive documentation.

Brochure of latest mining-related developments. A regular (quarterly) brochure should be published that outlines all metals and mining developments (new exploration projects, mine start-ups, financing etc) within the EU. This publication would be distributed at conferences and also available in PDF on a central website.

4.3. Pillar III: Increasing social acceptance

Support for the mining industry, in the public space, is often presented as a choice – between mining activity and protecting the environment and social rights of local communities. This has led to a negative perception around mining activity, perceptions that are often damaging to investment attractiveness. Additionally, some of these perceptions are not supported by facts. This should be addressed through two avenues.

EU citizens – creating and improving public awareness. Social license to operate is one of the biggest challenges in bringing new projects on line in Member States (and globally) and without a more positive perception being developed, this will continue to remain a challenge.

To address this, a public awareness campaign is warranted. This would educate citizens on how mining practices have progressed in Europe; the community engagement models that are employed; the stringent regulations on protection of environment that are applicable in the EU. These need to go beyond the stating of regulations that exist and showcase the results that have been achieved at operating mines.

In addition, mining's contribution to sustainable growth, as inputs into green technology equipment (solar panels, wind turbines, electric vehicles), needs to be presented.

Currently, most public awareness and outreach campaigns are carried out by mining industry associations (ICMM, EuroMines for example) and may therefore be viewed by the public as speaking for the industry. These campaigns need a more 'trust-worthy' champion – such as the European Commission.

While such public engagements can initially focus on regions where mines may/will operate, they do need to be aimed at the broader society, as opposition campaigns to mining in the EU are often a trans-border phenomenon rather than a localised one. The 'not in my backyard' approach by communities needs to be addressed with evidence and engagement.

EU Members of Parliament – the political message needs to change. Part of the process of building public trust in mining activity requires political leaders to engage with their constituents on mining activity. As stated earlier, the perception that one can either support the environment or mining needs to be challenged. As far as we are aware, no major political party has supported a pro-mining agenda in EU Member States, even where mining activity makes a strong contribution to the economy, over the past decade.

STRADE does not in any way or manner propose that the EU should instruct politicians should be advocates for the mining sector. We do suggest, however, that an internal awareness campaign, based on policy briefings and information packs, be specifically developed for politicians, to better inform EU political officials on responsible mining practices in the EU and provide 'talking points' with which to engage citizens, social media and the press.

This will allow Members of EU Parliament, and others, to make more informed comments and have meaningful discussions around mining activity.

4.4. Pillar III: Engaging in international organizations

Engagement with international standards organizations. The EU should consider pursuing a more active engagement with organisations that establish the international codes of conduct, rather than just being a financial supporter of such commitments. These would include the ICMM (for closer links with global mining companies), NRG1 (civil society and independent actors), EITI (which presents the government perspective) and IFC (representing investor principles).

Engagement with these organisations would facilitate two things. First, the reputational advantage suggesting that the EU is committed to participating in international best practice dialogues and considers mining to be an important sector. Second, direct engagement will increase exposure to current debates and trends within the global mining sector, allowing the EU to become part of the dialogue rather than an isolated by-stander, as it is currently appears. Members of these organisations have influence on the perception of investors on what are suitable mining investment decisions. Positive perceptions of the EU can thus aid in its promotion.

4.5. Pillar IV: Target investment groups

European mining companies. As discussed in Chapter 2, mining companies based in Europe spend only an estimated 15% of their global budget within their host continent, compared with comparable percentages of 38%, 40% and 57% for Canada, USA and Australia-based companies, respectively.

These companies should be a priority for the EU's promotion strategy, perhaps with targeted correspondence and follow-up meetings (ideally with the relevant Mines Ministers). Attention could be drawn between the favourable operating environment in the EU compared with Africa and Latin America, where much of the exploration expenditure is currently being targeted.

Perhaps also some form of fiscal encouragement could be made at the national level (similar to the Flow Through tax credits offered for Canadian exploration).

Mining companies not based in the EU. These companies represent a significantly harder target but form the bulk of the potential additional investment into the EU Member States. The promotion strategy could identify companies active in those particular third-party countries where a case can be made that the EU offers a superior investment opportunity (ie geologic potential plus operating environment).

Executives of these companies ought to receive personal invitations from Mines Ministers to visit prospective sites in the EU member country. These invitations would be hard for executives to ignore, especially if they coincide with appropriate nearby conferences (this is already accepted practice in southern African countries immediately before, and after, the Indaba conference in South Africa every February).

Financial investors. Every mining project represents a unique set of investment circumstances and investing institutions will look at them in isolation. Nevertheless, documents that demonstrate the long-term financial and political stability of the EU Member States will support the use of lower discount rates when investors evaluate the net present value of these projects.

To this end, a selection of the initiatives discussed above could be made available to selected investor organizations. This would be particularly effective if coupled with an invitation to meet senior government officials as personal contacts, and trust, still count for a lot in investment decision making.

4.6. Conclusions

The EU's aim to have access to a sustainable source of raw materials supply cannot materialise without active interest from the global mining investment community. The flat mineral production levels and the small exploration expenditure budgets testify to this.

For investors to be interested in the mineral sector, the mining jurisdictions do not have to have the 'perfect' risk assessment score. However, investors do need to be courted and interest in the sector generated. Compared with Australia and Canada, and a number of developing resource-rich countries, the absence of the EU is notable at major mining investment conferences, although this has recently started to change. Public information activities and marketing material in the public domain is also limited, compared with other jurisdictions.

Attracting mineral investment is a 'relative' issue – it is not only about an individual jurisdiction's evaluation but how it compares with other investment opportunities.

This report highlighted specific issues that act to reduce the attractiveness of the EU as a destination of mining investment. However, we also showed these are not insurmountable challenges. While it may be useful to address regulatory challenges themselves in Member States, it may be more prudent for market forces to deal with these issues.

A challenge for Member States is the level of mining activity within their regions, often single companies accounting for the majority of the operations. Therefore, governments are in essence dealing with single players. Were more interest generated in exploration and mining activity, mining authorities would be subjected to a wide range of engagements, whereby the mineral codes would naturally evolve to balance interests from mining companies and national priorities.

Therefore, the overall recommendation from this report is to promote investor interest in the mining sector in the EU. The aim is to increase the interaction between investors and the mining authorities in individual Member States. A secondary aim is to educate EU citizens and politicians about the best practice standards observed in the EU.

STRADE does not believe an EU wide mineral policy is required – a country's approach to exploiting its natural resources can be a complex issue and attempting to generalise such an approach for 28 Member States is impractical. Even within the same country, there may be different sentiments associated with whether, or not, to pursue mineral exploitation. A non-EU wide policy also allows for Member States to designate certain deposits as of strategic relevance and retained for future mining activity.

In summary, the promotion policy rests on the basic pillar of increasing access to information for exploration and mining companies, investors and the EU citizens. Part of this access is around

collating and providing information which already exists but is hard to access. The other part is actively presenting this information to those who are not aware of it.