



# REGIONAL CULTURAL IDENTITY AND STAKEHOLDER MAPPING REPORT

D4.1 Deliverable (Re-submission)

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Description of the related task and the deliverable. Extract from DoA	<b>Task 4.1 Establishing the SLO Framework (MinPol) M1-M6</b> Three different pillars are addressed in this task: <ol style="list-style-type: none"> <li>1. The European pillar in which the different regional cultural features (historical context of mining and metallurgy, cultural heritage, economic integration and transition), and the likely actors and partners in a SLO process within the respective regions, will all be mapped.</li> <li>2. The global pillar where there will be a review of the existing international guidance on facilitating public consultation and SLO, i.e. ICMM's 10 Principles of Sustainable Development; the Global Reporting Initiative; guidance pertaining to SLO and sustainability by funding organisations such as the World Bank, IFC, and IMF; UN declarations; ILO recommendations and other guidance developed outside Europe, e.g. in Australia, Canada, USA and Chile. Included in the global pillar will also be a review of the role professional ecologic movements and global environmental activists play in mining and metallurgy projects.</li> <li>3. The conceptual pillar, where the most recent academic and grey literature will be reviewed and summarised so that the latest SLO conceptual thinking is communicated with the relevant stakeholders. .</li> </ol>		
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## About MIREU

The project MIREU aims to establish a network of mining and metallurgy regions across Europe with a view to ensure the sustained and sustainable supply of mineral raw materials to the EU. The network will help the regions to share knowledge and experiences when facing the challenge to establish and maintain an extractive industry. MIREU will facilitate an exchange between all interested stakeholders in the regions, namely regulatory authorities, political and administrative bodies, development agencies, mining companies, non-government organisations, as well as the general public. The project will develop a shared knowledge base, taking into account the region-specific geographic and economic features, cultural, societal and language diversity, and their historical developments. The network will also learn from experience in other regions of the World. This knowledge base will allow to understand what has been conducive and what hampering to the development of extractive and metallurgical industries. It will also provide the context for a bottom-up integration of these activities into their respective socio-economic and socio-cultural context. Development is about people and, therefore, bringing people into the decision-making procedure in order to achieve a ‘social license to operate’ will be a key aspect of the project. Guidelines and recommendations for actions to be taken to foster a sustained and sustainable development of the extractive industries will be developed in close co-operation with a range of selected regions from the European Union. These regions will form a nucleus and multipliers for a more extensive network beyond the life-time of the project.

## Partners



## Acronyms and abbreviations

CD	Community development
CDA	Community development agreement
CSO	Civil society organisation
CSR	Corporate social responsibility
EITI	Extractive Industries Transparency Initiative
EU	European Union
FPIC	Free, prior and informed consent
ICMM	International Council on Minerals and Metals
IFC	International Finance Corporation
IIED	International Institute for Environment and Development
LU	Land use
MMSD	Mining, Minerals and Sustainable Development
NGO	Non-governmental organisation
PEST	Political, economic, socio-cultural and technological
SDG	Sustainable Development Goals
SLO	Social licence to operate
SMEs	Small and medium-sized enterprises

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# 1. EXECUTIVE SUMMARY

This report is part of MIREU's work package (WP) four titled 'Social Licence to Operate' (SLO) which seeks to create SLO guidelines and a SLO toolkit that help authorities in the MIREU partner regions initiate and facilitate exchange processes with the different stakeholders involved around mining and metallurgy related projects. The **overall objective** of this deliverable is to provide an overview of the current discussions around mining-related SLO issues globally (the 'Global pillar') and set the scene in Europe based on information from MIREU regions (the 'European pillar'). The **Global pillar** chapter is based on a literature review and gives an overview of important conceptual underpinnings as well as a review of existing SLO models and drivers which served as input for the construction of a working global SLO framework. It also includes a review of the roles of professional environmental movements in shaping SLO discussions.

The **European pillar** chapter presents the results of surveys conducted within eight MIREU partner regions (Andalusia, Castilla y Leon, Cornwall, Lapland, Saxony, Sterea Ellada, Styria, Lower Silesia) and has several objectives: to shed light on the different factors that affect SLO at the regional level, to investigate the overall acceptance of the mining and metallurgy industry in each region, and more specifically, to begin to understand how to gain (or lose) acceptance for a particular mining project in each of the identified regions. Selecting the regions was less an intentional process than a pragmatic one as the regions included are those that have been participating in the SLO work package (WP4) and provided the information requested. The information is organised according to the categories of a PEST (Political, Economic, Socio-cultural and Technological) analysis, which is typically used to determine background factors that may affect a given situation.

## **Findings - Global pillar**

### The importance of the 'governance' and 'public acceptance' concepts

Throughout the twentieth century, the mining industry faced criticism for harsh working conditions, environmental degradation, and negative social change (Humphreys, 2015). Due to undesirable circumstances that accompanied mining activities, particularly political unrest, emphasis on community relations spurred the proliferation of the concept of SLO (Moffat et al., 2016; see Schloss, 2002; Thomson and Boutilier, 2011), particularly in contexts where the legislation fails to meet the expectations of the public (Prno, 2013). The analysis of multiple social and environmental conflicts associated with the mining industry has now made it clear for the industry that mining companies need not only government permission but also 'social permission' to conduct their business. In other words, it has become increasingly evident that obtaining a formal licence to operate from governments and meeting regulatory requirements is *no longer enough* to conduct mining operations.

Companies are well aware that local communities may have the power to suspend or halt a development project, incurring high costs for the investor (e.g. Franks et al., 2014) and/or influencing a company's market capitalization (Henisz et al., 2014). Such considerations have enabled the rise of the SLO concept which can, in a general way and applied to mining projects, be defined as the ongoing approval and broad acceptance (or consent) of society for a mining project so that it can go ahead with its activities. The diversity of contexts and activities that came with the application of SLO engendered a similarly diverse analytical response. However, two distinct areas stand out: regulatory framework and societal values.

The regulatory framework plays a central role in the various definitions of SLO because the formal rules set the context in which mining companies operate. Therefore, looking at SLO and its related activities speaks to the relationship between the formal and informal processes – the combination of which is understood as institutions. Institutions (rules and decision-making procedures that give rise to social practice) are key to understanding how and why specific outcomes, such as SLO, are achieved or not. SLO potentially fills the gap when the formal rules fall short. On the other hand, SLO is a driver towards increased ‘governance’ as the concept encourages interaction between companies, communities, and interested stakeholders.

SLO continues to draw attention as a term utilized to measure the level of public acceptance for mining projects (Bursey and Whiting 2015; Parsons et al. 2014; Prno 2013; Owen & Kemp 2013; Prno & Scott Slocombe 2012; Cheshire 2010), but the practices and measures remain *under-defined* (Bice 2014). In part, the concept of SLO is intended to be reflexive to different contexts in order to account for the nuances that drive the disagreement and conflict from the beginning. However, this lends poorly to generalization. Identifying what constitutes a SLO practice compared to traditional CSR is problematic and, more importantly, the measures to assess when and where SLO is present are largely undefined.

In order to address the *lack of clarity on SLO*, Thomson and Boutilier (2011) developed a hierarchical structure, a pyramid model, to reflect the relationship between communities and companies. Rather than focusing on technical information, environmental measures, or economic outcomes, the central determinants instead focus on values and attitudes – whether or not the actions of the mining company and the outcomes of the mine match the expectations of the affected communities. To reflect the value-centric approach of SLO, Thomson and Boutilier also demarcate the range with normative criteria – legitimacy, credibility, and trust – to indicate how a community views company behaviour.

#### No consensus on how to define SLO and who grants it

There *exists no consensus or agreement on how SLO is defined*, and thus there exist many definitions and understandings of what the SLO concept targets and its scope. For example, research of Australia-based mining companies found that surveyed companies define sustainable development and their SLO through 3 broad areas of interest: *environment, social and community issues* and *employment practices*. Yet, while front-end positioning about the importance of “earning and maintaining” a SLO was common throughout the reports, none actually defined the “licensing criteria” through which such a licence is granted (Bice, 2014). However, there appears to be more general agreement in that SLO is intangible, it is an *unwritten* social contract between the company and the community that exists when a mine or project has the *ongoing approval* within the local community and other stakeholders. The SLO is “granted” by a certain constituency and it is dynamic and non-permanent, i.e. has to be earned and regularly maintained.

Another fundamental issue in the SLO discussion focuses on determining who the constituency that grants the licence is. In contrast to formal permits, SLO is not granted by a cohesive unit but by a *wide range of stakeholders, local and non-local communities*, what Boutilier calls a ‘non-cohesive stakeholder network’ (Boutilier, 2014). Thus, when talking about stakeholder relationships it is necessary to state that those directly located in the vicinity of an operation (*communities of place*) as well as those with a legitimate but perhaps less immediate interest (*communities of interest*) are both critical informants that shape the nature of social license (Franks et al., 2010). At the same time, the definition of “stakeholders” may encompass NGOs, the media and other kind of organisations.

### MIREU working global SLO framework

Based on an extensive literature review, a working global SLO framework was created. The framework's objective is to better understand which the main drivers are behind the achievement of the SLO in mining-related discussions. As can be deduced from the 'working' adjective, we expect to further discuss this draft framework during the remaining time available in MIREU to better adapt it to the European situation.

Our framework follows on from work by Prno and Slocombe (2014) who argue that the attainment of the SLO is influenced by **local-scale** and by **multi-scale variables** which include regional, national and international ones. Our analysis focused on local-scale variables, although the role of civil society movements was also targeted. Based on the literature review, four main drivers were selected:

- **Driver #1 – Public (or community) trust in the company** was chosen because it appeared as a strong predictor of community acceptance in Moffat and Zhang, (2014) and is given high considerations in the theoretical developments by Boutilier and Thomson.
- **Driver #2 – Public (or community) trust in the regulator** and the procedures implemented arises from literature dealing with weak governance environments, such as Latin America and Africa (e.g. Andrews et al., 2017; Martinez and Franks, 2014; Muradian et al., 2003; Superneau, 2010).
- **Driver #3 – Match or mismatch between expectations and real experiences of communities** appeared frequently in the literature as an essential driver of variables conditioning SLO issues (Salzmann et al., 2006; Warhurst, 2001) and whether a company is perceived as honest or dishonest/misleading.
- **Driver #4 – How communities perceive environmental risks** and potential for adverse environmental impacts (in connection to technology, scale and location of the project) frequently appears closely connected to the granting or withdrawal of the SLO.

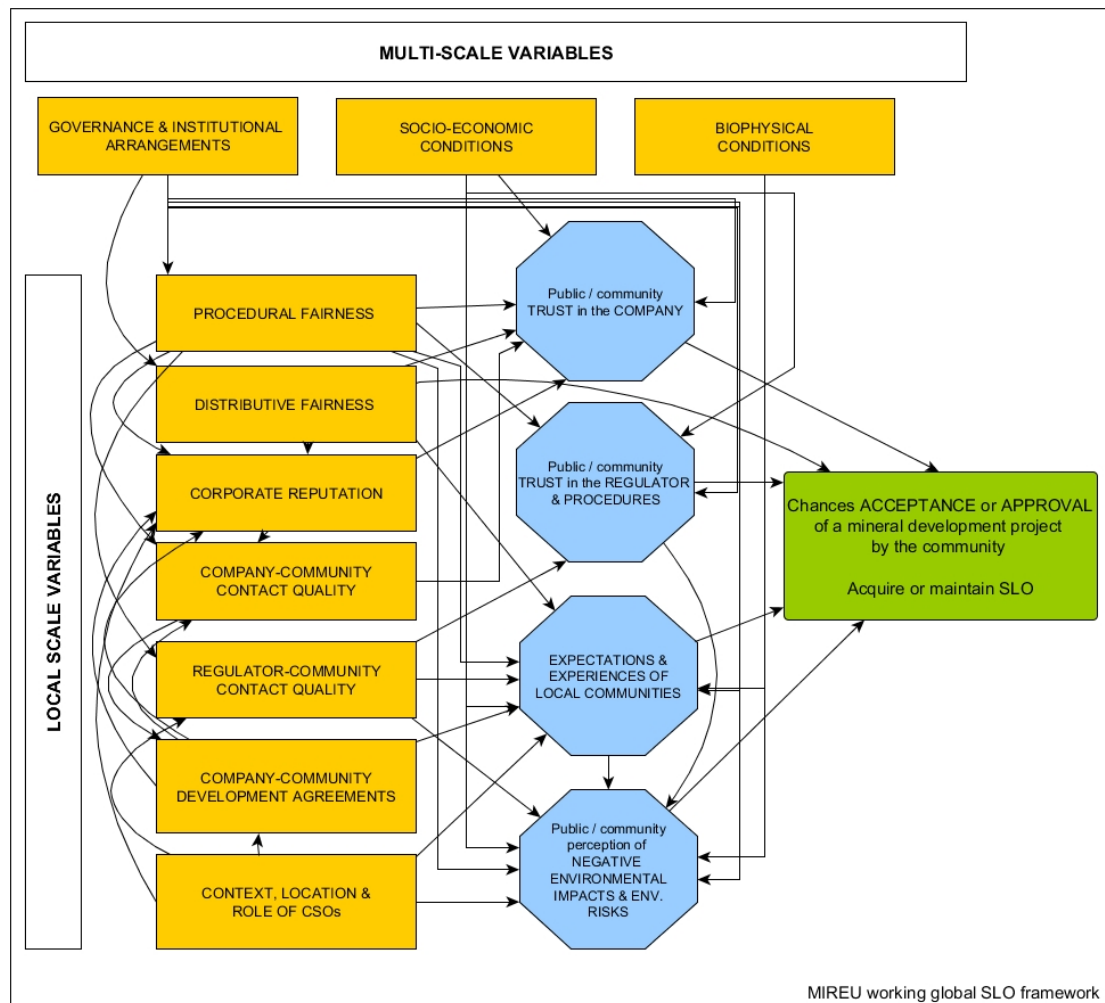
Such drivers are influenced by the *constant interplay* of multi-scale and local variables.

**Multi-scale variables** comprise the following elements:

- Governance and institutional arrangements
  - International legislation and regulations implemented by national governments
  - National government regulation and oversight (legislation and regulations, control & oversight mechanisms enforced by the government, etc.).
  - Non-state governance arrangements (industry self-regulation instruments such as due diligence, voluntary standards such as the Kimberley process, etc.)
  - Civil society arrangements (international activism and protest, involvement of non-local NGOs and labour organizations, etc.)
- Socio-economic conditions
  - Global market factors (demand & supply, metal prices)
  - Political reforms and macroeconomic conditions at national level

- Politics, history
- Biophysical conditions
  - Health and status of the biophysical environment caused by extreme weather events, climate change, environmental degradation, etc.

**Local-scale** variables are 7, as observed in the figure below. The figure illustrates the schematic influence of local-scale variables in main selected SLO drivers. Arrows represent the interrelationships between variables and drivers while octagons represent the main four drivers. The entanglement of arrows shows the high degree of interactions between variables themselves, and with/between drivers.



**Procedural fairness** addresses the quality of the procedures through which decisions are taken, i.e. evaluating if community members feel they had a reasonable voice or saying during a decision-making process. This variable is of importance as it influences the four drivers, i.e. if the community members with power to grant the SLO perceive they have actively participated in decision-making concerning decisions which affect their livelihoods (jobs, pollution risk, technology selection, etc.), they regard the procedure as *fair*. In Australia Moffat and Zhang (2014) found this variable to be the strongest predictor of trust. Fairness touches upon all stages of a mineral development project where decisions are made and there is a certain room for public participation, and is related to the concept of 'social risk' and public acceptance. As

Franks et al., (2010) found in Australia, recognising that perceived risk is a fundamental component of the social impact of technologies forces one to **reconsider risk evaluation** being conducted solely from the technical perspective that most technologists and engineers possess. The variables also influence other variables such as Corporate Reputation or the Contact Quality between company-government and communities.

**Distributive fairness** can be defined as the extent to which economic benefits from mining are distributed fairly (equitably) and each citizen receives a fair share of the benefits of mining. This is notably influenced by how citizens perceive they receive a fair share of benefits. Research from various countries (Australia, China, Peru, etc.) indicate that community acceptance is strongly related to the perception of a fair distribution of benefits (Moffat and Zhang, 2014; Pike, 2012; Superneau, 2010; Zhang et al., 2015). Therefore, this variable has a substantial influence on the trust in the company and expectations drivers (Drivers #1 & #3).

**Corporate reputation** is of importance as it influences the public or community trust in the mining industry and/or any specific project. It depends on a company's (and the industry's) track record, nowadays globally (digital era, telecommunications), and it is closely interlinked to the variable "company-community contact quality", i.e. whether the company is seen as transparent, open and responsive, and honest, or the opposite.

**Company-community contact quality** is another key variable at the global level as there exist many case studies which indicate that poorly managed or insufficient community engagement practices can lead to escalating conflicts. Important elements that can influence the quality of contacts include whether the engagement occurred early and in a 'meaningful' way, if communications were managed in a professional way by mining companies, if free, prior and informed consent principles were applied (particularly in territories managed by indigenous communities), how conflicts of values and interests were managed and how CSR and community development programs were applied. For instance, research by CSIRO in Australia (CSIRO, 2018) revealed that community concerns strongly influence the way the minerals industry operates and how governments regulate it. CSIRO found that as stakeholder expectations and experiences of mining impacts converge, acceptance and approval of an operation increases. Conversely, failure to deliver on promises made to the community is a factor that undermines a company's capacity to acquire/maintain SLO (Wall Planning & E.C., 2018).

**Company-community development agreements (CCDA)** are formal or informal agreements between mining companies with a permission to conduct mineral developments and a community impacted by the planned operations (e.g. in Canada impact and benefit agreements between companies and indigenous communities). CCDAs can be very influential in helping to attain the SLO as they have the potential to become a useful tool to help define and manage community expectations; this impacts on the corporate reputation and the public trust in companies. CCDAs are part of CSR activities, and one important way to improve CSR practices is to actively engage CSR recipients in the decisions on what should CSR be spent on.

**Regulator-community relationships** are an important variable to achieve SLO in areas where weak governance exists such as (generally speaking) Latin America or Africa. As found by Moffat et al. (2014b, 2014a) the perception by citizens of a government's 'governance capacity' (understood as the extent to which citizens feel that their governments and legislation/regulation can ensure mining companies do the right thing), acts as a strong predictor of trust. Various studies from Latin America determined that lack of trust in the regulatory system (and in



regulators) negatively influences SLO and create serious difficulties in legitimizing the project assessment and approval (Martinez and Franks, 2014; Muradian et al., 2003). Moreover, if local people perceive a regulator to be overly ‘pro-development’ (or ‘pro-mining’) they will be less likely to believe their interests are being adequately protected by such organizations (Prno and Slocombe, 2014).

**Context, location & role of CSOs** constitute also essential variables. The location of new projects is of importance as it is directly linked with the socio-cultural and political-environmental context where the project intends to operate; for instance, if a project is planned to be placed or affecting areas where indigenous communities live, then the project planning needs to pay special attention to cultural differences. Moreover, and as shown by the analysis of manifold socio-environmental conflicts related to mining projects, one important reason why some groups oppose mineral developments lies in rationalities and systems of values (including valuation languages) different than the ones driving mining companies (see e.g. Martinez-Alier, 2009, 2002, 2001). Likewise, location is linked to the history of the place. This is of importance as past experiences of communities with respect to the mining industry are highly influential in their perception of the industry as an opportunity or a risk.

Last but not least, **the role of CSOs** (including environmental NGOs, foundations, watchdogs, industry lobby, grassroot movements/collectives, etc.) is of strategic importance in the empowerment of communities. In some cases, the role of CSOs led to a higher awareness raising (via campaigns) of the harmful social and environmental impacts of the industry and the implementation of responsible mining standards (e.g. IRMA, Kimberley process). In other cases, CSOs played an active role in supporting communities wishing to engage in negotiations and CCDAs e.g. in Canada with IBAs (Gibson and O’Faircheallaigh, 2010) while grassroot CSOs have also created manuals to support the resistance movements against mining projects (e.g. in Ecuador Zorrilla, 2009). Other notable roles of CSOs, especially of environmental NGOs, has been in the construction of the ‘environmental risk’ concept perceived by communities (Vesalon and Crețan, 2013) as well as in the acting as plaintiffs against granted exploration or extraction permits (see Minlex final report for analysis of cases, MinPol, 2017). CSOs have thus, via multiple instruments, a substantial power to influence public and community trust in companies and regulators as well as in shaping their expectations and perceptions of risk.

### **Findings - European pillar (8 MIREU regions)**

In terms of setting the scene, the European Pillar differs somewhat from the Global Pillar in that there is relatively little information about what SLO means within the context of Europe’s mining regions or how it actually functions. For that matter, SLO as a term itself is rarely used. In the eight regions that were mapped, only one region – Finnish Lapland – has integrated the term linguistically into the mining lexicon. That said, most of the regions equate SLO with the concepts of sustainability and Corporate Social Responsibility, so there is a basic understanding of the broader ideals that SLO is meant to embody.

What is different in Europe, as opposed to countries such as Canada and Australia who have been actively working for decades to understand the mechanisms underlying SLO and the preconditions for its success, is that the dynamics between companies and communities have not yet been comprehensively explored. However, even from this initial mapping exercise, differences are emerging in Europe as to who the crucial actors are in the SLO relationship. Whereas most international literature focuses on building trust between communities and companies, in Europe, the public typically perceives government (in this case the Regional

Administrations) as having more legitimacy and credibility with the public than do the mining companies. And some of the Regional Administrations have also expressed a desire to more proactively assume a stronger role in building SLO and mediating conflicts between communities and companies. As the SLO work in the MIREU project progresses, more light will be shed on these differences, and the challenge will then be to assess whether SLO can be standardized throughout Europe's mining regions.

### **Final reflections and outlook**

Discussions around what the SLO is, who grants it, how it can be acquired and/or maintained and the main factors that determine its acquisition/maintenance are a fertile and dynamically evolving research field at the international level and around mineral-related discussions. Multiple contributions exist from scholars from Canada, Australia, Peru, Chile or even China. However, the SLO discussion around mining-related issues in Europe appears to be still in its infancy. In mapping the eight MIREU regions, we found neither SLO definitions nor concepts, with the exception of some areas where Canadian companies are operating (like the Lapland region), in contrast to ample and long-standing research in Canada or Australia.

Our global literature review indicates that the SLO topic is growing in importance within the mining sector fuelled by an increasing awareness of the number of conflicts associated with the extractive industries. While its roots lie in jurisdictions with little to no regulatory oversight, SLO now finds application in highly regulated ones and is becoming a term utilized by the mining industry to measure the level of public acceptance for projects. Moreover, shifting so much attention from the regulatory framework towards social acceptance indicates a paradigm shift and a possible trend of informal instructions, such as SLO, as pre-requisites for gaining formal licences.

As determined by the theoretical developments of Thomson and Boutilier, rather than technical information, essential elements of the relationship between communities, government and companies are the perceptions, systems of values and attitudes of communities, e.g. expectation and aspirations, perceptions of environmental or social risks, on the corporate reputation, trust in the formal institutions and the procedures (e.g. environmental assessments) as well as system of values underpinning a community's decision-making. In this sense it is necessary to understand how constituencies may be influenced by different actors (companies, governments, CSOs) via campaigns and other instruments. In parallel it is important to understand who the constituency is that will grant the SLO as the licence is not granted by a cohesive unit but by a wide range of stakeholders (local and non-local communities).

Utilizing the PEST analysis format (political, economic, socio-cultural, technological) for the European pillar allows us to now paint a broad picture of mining's role – past, present and future – in each of the European regions that have been mapped. In so doing, Europe's rich diversity and heritage is perhaps the one obvious constant. Some regions, such as Styria, have selected land use planning as the main mechanism to regulate mining and stave off conflicts. Other regions, such as Upper Silesia, place a strong emphasis on company-initiated engagement strategies. Lapland merges strong legislation with also simultaneously emphasizing corporate responsibility and engagement. As the SLO conversation in Europe is really just emerging, all of these different approaches to reconciling mining-related conflicts make sense as it is not clear, at present, what works and what does not. This is, however, one of the main goals of the SLO work in MIREU – to come up with minimum standards that mining companies, who want to undertake mining and metallurgy activities in Europe, observe.

One of the reasons why it is such an interesting time to be involved in better understanding what SLO looks like in Europe is that there is a conscious effort underway to revitalize the mining industry, with the precondition that it be done sustainably, responsibly and with a net

benefit to society. While these are obvious and common goals, there is also now a clear willingness taking root in European society to tussle with, and concretely reconcile, difficult issues and competing agendas. It is this continuous engagement with all of the relevant actors that will continue to drive the future SLO work in MIREU.



## 2. INTRODUCTION

Metal mining activities, including the extraction, beneficiation and metallurgical treatment of ores, used to be core, traditional economic activities of many European regions such as Cornwall (UK), Styria (Austria) and Andalusia (Spain). The deindustrialization of Europe and the increasingly competitive supply of minerals from non-European countries substantially reduced the presence and public knowledge on the socio-economic importance of domestic mining and metallurgy activities. Since the 1980s, but especially during the 1990s and 2000s, along with an increasing globalization and environmental awareness, the metal mining industry gained a bad reputation based on a wider dissemination of bad practices, accidents (tailings dam failures, chemical spills, etc.) and conflicts with communities; conflict incidents associated with mining operations worldwide increased dramatically between 2000 and 2013 (Andrews et al., 2017). In Europe, such phenomenon was coupled with structural demographic and socio-economic transformations of many regions that lost economic and political power, inhabitants and had to ‘reinvent’ themselves.

Globalization pushed new institutional arrangements and the emergence of the ‘governance’ concept drawing attention away from the government towards the interaction of state (governments, judicial powers) and non-state actors (international organisations, banks, companies, shareholders, communities, media, environmental NGOs, etc.) for the establishment of the ‘rules of the game’ which underpin any mineral development project. In this new context, formal and informal institutions (rules and decision-making procedures that give rise to social practice) are key to understanding how and why specific outcomes are achieved or not. The analysis of multiple social and environmental conflicts associated with the mining industry has now made it clear for the industry that mining companies need not only government permission but also ‘social permission’ to conduct their business. In other words, it has become increasingly evident that obtaining a formal licence to operate from governments and meeting regulatory requirements is *no longer enough* to conduct mining operations.

Companies are well aware that local communities may have the power to suspend or halt a development project, incurring high costs for the investor (e.g. Franks et al., 2014) and/or influencing a company’s market capitalization (Henisz et al., 2014). Such considerations have enabled the rise of the ‘social licence to operate’ (SLO) concept which can, in a general way and applied to a mining project, be defined as the ongoing approval and broad acceptance (or consent) of society of a mining project so that it can go ahead with its activities. As such, the SLO concept does not refer to a formal agreement but to the credibility and acceptance of mining companies and their projects. Put differently, it may be defined as an intangible and unwritten social contract with society which enables an extraction or processing operation to enter a community, start, and continue operations. Research has found that it is rooted in the beliefs, perceptions, and opinions held by the local population and other stakeholders and it is dynamic and non-permanent because beliefs, opinions and perceptions are subject to change as new information is acquired. Hence the SLO has to be earned and maintained (Thomson and Boutilier, 2011).

The SLO is not materially available to companies in ways that are comparable to a regulatory licence for exploration or mining which have specified conditions and obligations, and which are monitored by a regulatory authority typically with power to revoke the licence should conditions not be met. This represents new challenges for companies, regulators and state actors as the SLO needs be granted by an uncertain and ever changing number of stakeholders, e.g.

defined as a *non-cohesive stakeholders network* (Boutilier, 2014), which may include local but also regional and even international organisations with an interest in the project to be developed.

MIREU considers mining and metallurgy as key drivers in European sustainable development and an integral part of smart specialisation in terms of resource efficiency and a circular economy. As mines can have both, positive and negative impacts on the environment and their host communities, the aim is to provide regional authorities and other stakeholders with a range of options for understanding, discussing, negotiating and resolving new complex challenges such as SLO at the regional level that arise as a result of societal discourses between communities, regional authorities, regulators, and mining companies.

In that sense, in this report we discuss the following questions:

- In the face of new mining and metallurgy projects, what is the social licence to operate? How can the concept be defined and what are its main characteristics?
- What are the relevant scales of analysis and main drivers behind SLO discussions globally and in Europe in relation to mining and metallurgy projects?
- What role do civil society organisations (CSOs), including professional environmental NGOs, play in discussions around SLO in mining-related projects?
- What is the status of SLO discussions around mining and metallurgy related projects in Europe? It is deeply involved in discussions in the regions?
- How are mining and metallurgy activities perceived in the partner European regions?

### 3. OBJECTIVES, SCOPE AND METHODOLOGY

The overall objective of this report is to provide an overview of the current discussions around mining-related SLO issues globally and set the scene for discussion in Europe.

Specific objectives are:

- Review existing definitions of the SLO concept and conceptual underpinnings;
- Identify main global drivers determining the achievement of the SLO in mining-related discussions, including a focus on the role of CSOs and NGOs;
- Establish a working global MIREU framework around the SLO discussions;
- Identify the status of mining-related SLO discussions in Europe;
- Identify and describe background factors of SLO in selected MIREU partner regions using a PEST analysis.

This report will be used as input for the SWOT Analysis for SLO relevant strategies (Task 4.3), SLO Guidelines (Task 4.4, M18 - M34), SLO Toolbox (Task 4.5, M18 - M34), Task 4.6 – Development of SLO indicators and validation process (M30 – M35).

## Scope

This report is focused on SLO discussions related to metal mining operations, mainly large-scale mining ones which are the main concern of stakeholders and of which more literature exists. The global pillar part deals with literature (mainly in English language) addressing lessons from global cases while the European pillar is focused on eight selected MIREU partner regions: Andalusia, Castilla y Leon, Cornwall, Lapland, Saxony, Sterea Ellada, Styria, Lower Silesia. For the European pillar different regional cultural features (historical context of mining and metallurgy, cultural heritage, economic integration and transition), and the likely actors and partners in a SLO process within the respective regions are identified.

## Methodology

The report is structured in two pillars: global and European pillars.

The **global pillar** contains a conceptual analysis on important concepts behind the SLO as well as some SLO definitions, all based on a literature review (mainly in English language). The chapter advances on identifying main SLO drivers based on a review of existing models and literature such as international guidance on facilitating public consultation and SLO, e.g. ICMM's 10 Principles of Sustainable Development, the Global Reporting Initiative, guidance pertaining to SLO and sustainability by funding organisations such as the World Bank and IFC, among others.

Based on such models and literature, a **working global MIREU SLO framework** was created (see Figure 6). The framework was primarily based on a scheme published by Prno and Slocombe (2014) which argues that the local attainment of the SLO is conditioned not only by **local-scale variables**, but by **multi-scale variables**, which include the supra-national level (e.g. EU), and national levels. This is based on mounting evidence demonstrating that the SLO of mining projects at the local and regional scales can be affected by what happens at national or even international scales (e.g. Haarstad and Fløysand, 2007; Hood, 1995; Prno and Scott Slocombe, 2012). For instance, the reputation of a multinational company, an important variable influencing a local community's trust in it, is determined by the global actions of such company and by global role of CSOs acting as 'watchdogs' of such company.

**Multi-scale variables** were defined, identified and expanded based on the framework by Prno and Slocombe (2014); they include new institutional arrangements at international scale such as international commitments by national governments (e.g. UN SDGs, EITI), non-state governance arrangements (e.g. self-regulation by the mining industry such as GRI reporting, ICMM's principles, etc.) and civil society arrangements (e.g. networks of NGOs, international activist campaigns, etc.).

**Local-scale variables** were defined after reviewing the existing literature. This was done by first identifying the main drivers of SLO and then by grouping the variables that affect such drivers. SLO was defined as the '*chances of acceptance or approval of a mineral development project by the community*'. Four main drivers were identified based on the literature as follows:

- **Driver #1: Public (or community) trust** in the company (and the industry) was chosen because it appeared as a strong predictor of community acceptance (i.e. of SLO) in the study by Moffat and Zhang, (2014) and is also given high considerations in the theoretical developments by Boutilier and Thomson.

- **Driver #2 Public (or community) trust** in the regulator (government) and the procedures implemented arises from literature dealing with weak governance environments, such as resource-rich countries in Latin America and Africa, where distrust in the regulator, e.g. due to conflicts of interest, triggers conflicts and impedes attaining the SLO (see e.g. Andrews et al., 2017; Martinez and Franks, 2014; Muradian et al., 2003; Superneau, 2010). This influences variables like company-community contact quality as the government and its institutions play an influential role in establishing the platform from which a relationship based on mutual trust between stakeholders may be built (Moffat et al., 2016).
- **Driver #3:** The issue of the degree of match (or mismatch/divergence) between **expectations and real experiences of communities** appeared frequently in the literature as an essential driver (or predictor) of variables conditioning SLO issues (Salzmann et al., 2006; Warhurst, 2001) and whether a company is perceived as honest or dishonest/misleading. According to the literature, expectations may be managed via CDAs, professional communications and other instruments, see e.g. (CSIRO, 2018; ICMC et al., 2013; Otto, 2017; Wall Planning & E.C., 2018).
- **Driver #4:** Finally, the issue of **how communities perceive environmental risks** and potential for adverse environmental impacts (in connection to the technology, scale and location of the project) also frequently appears closely connected to the granting or withdrawal of the SLO. This is also compounded by the role of CSOs as legitimisers, information providers and watchdogs during all stages of new projects (Vesalon and Crețan, 2013).

Included in the global pillar is also a review of the role professional ecologic movements and global environmental activists play in mining and metallurgy projects also based on existing literature.

The **European pillar** chapter conducts an informal PEST analysis<sup>1</sup> by mapping background factors in eight of the MIREU partner regions that contribute to gaining and maintaining SLO. The exercise has the goal of collecting information about the overall acceptance of the mining and metallurgy industry in the regions, and more specifically, to begin to understand how to obtain (or lose) the acceptance for a particular mining project in the region<sup>2</sup>. Both the stakeholders, and the regional context that form the space in which the interactions between actors involved in mining and metallurgy projects occur, were mapped. The following describes the type of information collected using the PEST categories:

- **Political landscape and legislative framework:** This category includes the political support at the regional level, the pertinent mining legislation, and the mining-related governance structure, in particular, whether regulatory powers over mining rest primarily at the national or regional levels. It also contains relevant soft law measures.
- **Economic effects and influences:** This category looks at the economic role, past and present, of the mining and metallurgy industry in the regions. It does not focus on

<sup>1</sup> Using the PEST categories allows to conduct future PEST analyses, which will likely be aimed at testing how and to what degree the role of Regional Administrations can contribute to furthering SLO. PEST analyses feed into SWOT analyses as well, and there will be a SLO SWOT done later in the project (Task 4.3).

<sup>2</sup> see case studies in Appendix 8.1.2

community level economic development and wealth capture but does peripherally discuss the importance of jobs and training at the local level.

- **Socio-cultural dimension:** This category addresses specific cultural features of the regions, their identity as a mining region or not, and whether indigenous peoples or recognized minorities (i.e. the Sorbs in Saxony) are present. It also looks closely at the sources of tension in a region, i.e. land use tensions involving world heritage, traditional livelihoods such as reindeer herding, etc.
- **Technological influences and opportunities:** This category mainly looks at current technologies used and future technologies waiting in the wings. Further research during the MIREU project will seek to shed more light on technology's potential for redefining the mining industry hence making it more socially acceptable. Research will also focus on emerging issues of contention such as the jobs/technology balance, issues over how technology should be 'socialized' and how to (and who should) communicate the pros and cons of technology to the public.

The information primarily was gathered from the MIREU partners, the SLO Workshop in May 2018, other work packages in the MIREU project (WP2 in particular) and data from the REMIX project<sup>3</sup>.

## Report outline

The report is divided in the main part (6 Chapters) and an annex which contains further details about information collected for the European pillar.

Setting the SLO scene was based on a comprehensive mapping process. The information collected is based on a review of existing literature. The mapping process is focused on the Global pillar, Conceptual pillar and European pillar. The Conceptual and Global pillars were merged in Chapter 4 as the conceptual review was integrated into the working global SLO framework.

The mapping of the European pillar is presented in Chapter 5 with a review of existing literature and the support of regions (information in the annex) using the PEST method. Chapter 6 includes final reflections and outlook.

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<sup>3</sup> See Appendix 8.1.3 for a detailed list of sources.



## 4. THE GLOBAL PILLAR

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### 4.1 Conceptual overview

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#### 4.1.1 Introduction

Throughout the twentieth century, the mining industry faced criticism for harsh working conditions, environmental degradation, and negative social change (Humphreys, 2015). From both external and internal pressure, the industry evolved and, like many other industries, adopted corporate social responsibility (CSR) practices. On the external side, CSR activities typically focus on six themes: (1) societal legitimacy (social license); (2) swaying public opinion; (3) moral responsibility to nearby communities; (4) transparency of operations (Extractive Industries Transparency Initiative); (5) environmental protection; and, (6) risk management to promote socially responsible investing (Hutchins et al., 2007:26-27). Internally, CSR revolves around four issues: (1) competitive advantage; (2) stable work environment; (3) public relations; and, employee motivation (Frynas, 2005). Recently, however, the primary focus of CSR within the mining industry shifted to one key external factor, societal legitimacy, in the form of social license to operate (SLO).

Due to undesirable circumstances that accompanied mining activities, particularly political unrest, emphasis on community relations spurred the proliferation of the concept of SLO (Moffat et al., 2016; see Schloss, 2002; Thomson and Boutilier, 2011), particularly in contexts where the legislation fails to meet the expectations of the public (Prno, 2013). In turn, theoretical development followed as both practitioners and scholars aimed to place the concept within existing theory and definitions. The diversity of contexts and activities that came with the application of SLO engendered a similarly diverse analytical response. However, two distinct areas stand out in their influence on the definition and analysis of SLO: regulatory framework and societal values.

The on-going work on these two areas is central to grounding SLO within well-established, albeit contested, concepts in social science, governance and public acceptance. Linking these concepts with SLO in many respects mirrors the practice and understanding of SLO within the mining industry, particularly the scope of the analysis from the local level to a broader societal perspective. Social licensing is often reference to the bilateral relationship between a company and the affected local community (Esteves and Barclay, 2011), although the argument also exists to expands the scope to include the company's relation to "the wider society, and various constituent groups" (Gunningham et al., 2004:313). The various focus of SLO activities, therefore, precipitates different outcomes.

A majority of these efforts contribute to the tacit relationships between the company and the community, where decisions made by the mining company on construction and operations first consider input from the community before moving forward. But the result may also come in the form of voluntary, formal agreements between mining companies and communities, such as Impact Benefit Agreements, where the benefit-side focus on the opportunities brought by mining development and the impact-side focus on the social risk factors, such as adverse socio-economic or health effects. The promise is to achieve "a more sustainable mining development by...engaging in the appropriate level of consultation and providing adequate benefits and compensation" (Hitch and Fidler, 2007:50). In these types of arrangements, we see both the procedural (governance) and content (acceptance) aspects of mining development. However, these agreements, tacit and codified, target the communities in close proximity and their perception of the mine while the relationship between SLO and the broader society is less obvious.

Mining companies, and the industry more generally, carry reputations that influence their capacity to operate in different jurisdictions. But the many of the debates on economic development versus environmental conservation, national interest versus local benefits, and societal transformation versus cultural preservation all serve as points of divergence amongst actors involved in and affected by mining development (Anguelovski, 2011; Arellano-Yanguas, 2011; Bebbington and Williams, 2008), also transfer to the national and/or regional level. However, since the impacts of the mine are less visceral and the relationships less direct, gauging SLO at a higher level becomes vague – particularly as issues of national interest go beyond any individual company. Therefore, from an academic perspective, analysing SLO with governance and public acceptance as a point of departure provides the basis for elucidating the different factors critical to social license at a small- or large-scale.

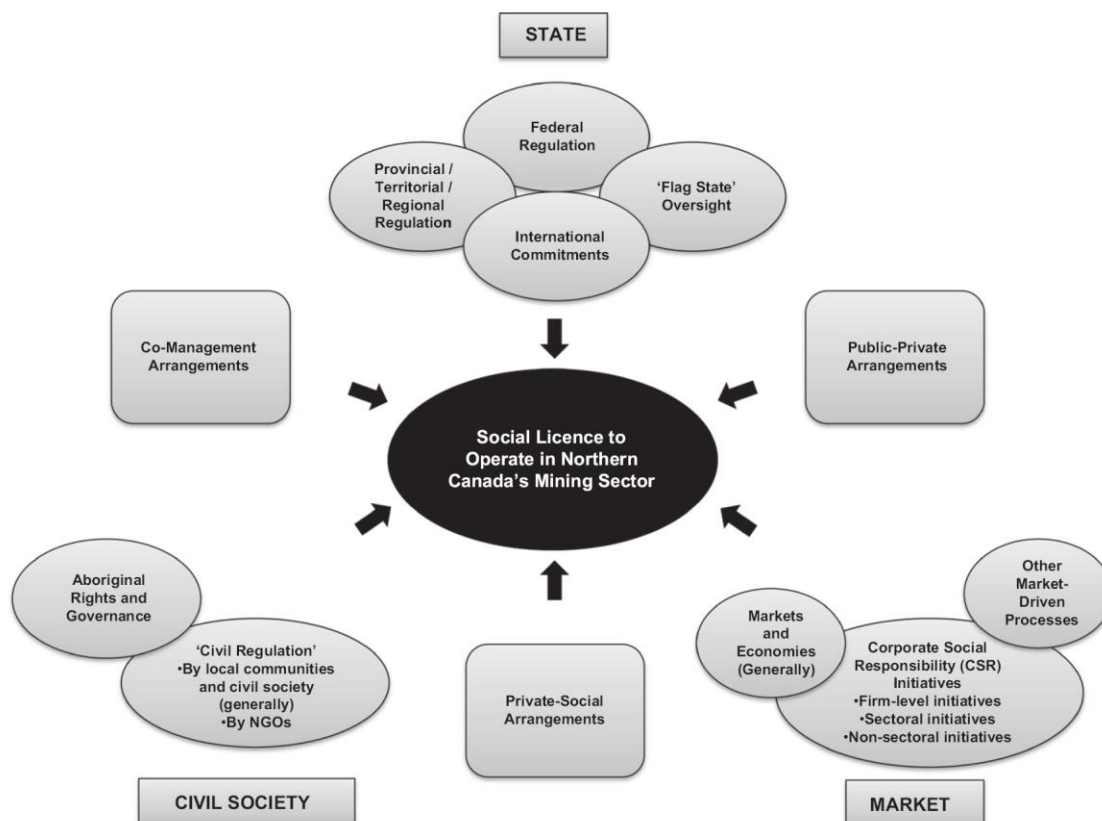
#### 4.1.2 Governance

The regulatory framework plays a central role in the various definitions of SLO because the formal rules set the context in which mining companies operate. Therefore, looking at SLO and its related activities speaks to the relationship between the formal and informal processes – the combination of which is understood as institutions. Institutions, which are defined as rules and decision-making procedures that give rise to social practice (Young et al., 2008) are key to understanding how and why specific outcomes, such as SLO, are achieved or not. While political institutions are understood in different ways, particularly regarding institutional creation and change, an institution is commonly viewed as “the rules of the game” (Peters et al., 2005) and “a relatively enduring collection of rules and organized practices, embedded in structures of meaning and resources that are relatively invariant in the face of turnover of individuals and relatively resilient to the idiosyncratic preferences and expectations of individuals and changing circumstances (March and Olsen, 1984:3).” Or, stated more directly by North, (1991:97), “*Institutions are the humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights).*”

Institutional analysis typically identifies and assesses the rules and procedures relevant to an area of investigation with the aim of developing a better appreciation of why initiatives succeed or fail (Prno and Slocombe, 2012). In this sense, SLO potentially fills the gap when the formal rules fall short. One of the critical points to consider in assessing the role SLO plays in the mining industry is its capacity to address the range of issues that fall outside of regulations that arise during the development and operation of a mining project – the effect SLO holds on different institutions in different contexts and, more importantly, if SLO itself is robust enough to carry the weight that weak institutional contexts bring.

Closely tied to the discussion on institutional gaps is the relationship to governance. On one hand, SLO is reflective of the shifts in governance in which other, non-government stakeholders interact to produce policy outcomes. On the other hand, SLO is a driver towards increased governance as the concept encourages interaction between companies, communities, and interested stakeholders – outside the purview of government. In this regard, the governance concept (see Kooiman, 1993; Peters and Pierre, 2008; Stoker, 1998) recognises the importance of institutions which may be enabling (incentive based), constraining (e.g. regulation based), formal (law- based) and informal (e.g. customs-based) (Mehta et al., 1999), but place them in a larger socio- political context. The concept of SLO, and all its related activities, fit the interplay between governance and institutions; testing the capacity of SLO to affect change in established institutional settings.

Prno and Slocombe (2012) explain the concept of SLO by linking it to the classic state, market, society model of governance (Kooiman, 1993; Peters and Pierre, 2008; Stoker, 1998). They conclude that the institutional and governance context is key to understanding how and why SLO is achieved, and that further research is needed to determine which governance models function best in different social, political, and economic contexts. The governance triangle (Figure 1) reflects the range of the relations and arrangements that can emerge in the development and operation of a mine.



**Figure 1:** Governance triangle between state, market, and society as it related to SLO source: Prno and Slocombe, (2012)

Although the interplay between market, community and state actors is emphasized in the governance literature, current trends reveal that state intervention and legal regulation of the mining sector is actually increasing around the world (Brereton, 2004; Deloitte Global Services Limited, 2011; Pring and Noé, 2002). Therefore, the role of SLO in institutional change represents an important point of departure for future research to assess its influence on the structure of minerals policy. The governance model developed by Prno and Slocombe was then adapted by Morrison, (2014) to reflect the different licenses possible from each of the three sectors: legal license, economic license, and social license. This description of the activity is referred to as the Three Strand Model.

Identifying the institutions related to mining goes hand-in-hand with understanding the norms, values, and rules in the political, corporate, and societal realms. Responsible in helping shape the creation and change of formal and informal processes, institutions are influenced by and, in turn, influence various facets of society. Further, viewed as institutions, political context and history vary across nations, states and cultures. While setting the framework for actors granted access to the mine development process, and the shaping of the process itself, institutions should



be viewed within the temporal context – the contemporary rules, policy structures and norms permeating society (Pierson, 1996:126). Institutions, as a reflection of the political mandate and societal values of the day, should place emphasis on issues of local socio-economic development and environmental protection – particularly for land use that often requires approval from multiple levels of government and multiple government ministries and agencies. Therefore, SLO may work in favour or against the established institutional practices. If interested actors deem the current regulatory framework unsatisfactory, through SLO the opportunity may emerge to alter the existing institutions – amending a perceived lack of fairness.

However, because SLO encourages *extra-legislative* activity, the role of government becomes ambiguous. Some argue that social licensing may involve transferring regulatory authority to largely unaccountable agents (Utting, 2005). Others argue that SLO activities provide opportunities for innovative agreements and venues for establishing or refining indigenous rights (Andolina et al., 2003; Rumsey and Weiner, 2004; Urkidi, 2011; Yagenova and Garcia, 2009). Unconstrained by the established regulatory process, a new arena for negotiations and bargaining opens and private agreements on land rights and land may offer the potential for broader institutional change in the longer term. However, the interplay between the established regulatory framework and the SLO related extra-legislative commitments are not well researched, leaving an opportunity for future work.

Nevertheless, the connection between SLO and governance underscores the variation in the possible relationships and breadth of outcomes that coincide with modern mining practices. Social license to operate, as a concept, echoes many of the arguments made by governance theorists in political science. Social licensing equates to some quality or activity in addition to the formal and legal requirements that companies apply in their planned or actual operations. And, in the mining sector, social licensing includes processes and content aiming at the entire life-cycle of the mine; building and strengthening collaborative processes in the development, operation and closing of mines, as well as delivering acceptable content – the costs and benefits.

#### 4.1.3 Public Acceptance

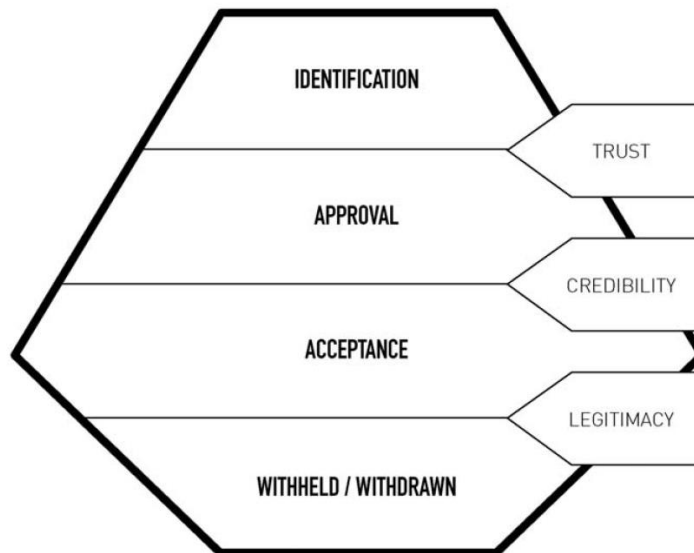
Today, a growing trend within the industry is using SLO as an indicator of a company's standing within the communities it affects. Therefore, strong parallels exist between SLO and legitimacy. Both recognize the importance of attitudes and perceptions (Thomson and Boutilier, 2011) in a set of relationships that occur within and without legislation and regulation (Prno and Slocombe, 2012). Further, each require the affect actors to offer some type of acceptance or endorsement of the authorities' actions (Gehman et al., 2017). These linkages warrant further study.

Social license to operate (SLO) continues to draw attention as a term utilized to measure the level of public acceptance for mining projects (Bursey and Whiting, 2015; Kemp and Owen, 2013; Parsons et al., 2014; Prno, 2013; Prno and Slocombe, 2012), but the practices and measures remain *under-defined* (Bice, 2014). In part, the concept of SLO is intended to be reflexive to different contexts in order to account for the nuance that drive the disagreement and conflict from the beginning. However, this lends poorly to generalization. Identifying what constitutes a SLO practice compared to traditional CSR is problematic and, more importantly, the measures to assess when and where SLO is present are largely undefined.

While its roots lie in jurisdictions with little to no regulatory oversight, SLO now finds application in highly regulated and is becoming a term utilized by the mining industry to measure the level of public acceptance for projects (Bursey and Whiting, 2015; Kemp and Owen, 2013; Parsons et al., 2014; Prno, 2013). Rooted in mining and mineral development, SLO also found its way into other resource and land use sectors such as forest management

(Dare et al., 2014), infrastructure development (Hanna et al., 2014) and tourism (Coles et al., 2013; Williams et al., 2007).

In order to address the *lack of clarity on SLO*, Thomson and Boutilier (2011) developed a hierarchical structure, a pyramid model, to reflect the relationship between communities and companies. The range they outline begins with withdrawal at the bottom to acceptance and approval in the middle and psychological identification at the top. These psychological criteria mark an important distinction for the examination of SLO.



**Figure 2:** The Pyramid Model of SLO from Boutilier and Thomson (source: Gehman et al., 2017)

Rather than focusing on technical information, environmental measures, or economic outcomes, the central determinants instead focus on values and attitudes – *whether or not* the actions of the mining company and the outcomes of the mine match the expectations of the affected communities.

To reflect the value-centric approach of SLO, Thomson and Boutilier also demarcate the range with normative criteria – legitimacy, credibility, and trust – *to indicate how a community views company behaviour*. *Legitimacy* delineates when “a company that has lost its social license and one that has a minimum social license” (Thomson and Boutilier 2011). The consideration of community perception is critical and align closely with a definition of legitimacy as “the belief that authorities, institutions, and social arrangements are appropriate, proper, and just” (Tyler, 2006). As to the second criteria, *credibility*, Thomson and Boutilier (2011) argue, “*When a company is regarded as credible, it is seen as following through on promises and dealing honestly with everyone.*” Companies must follow through on their commitments and claims to the benefits of the mine. The final criteria, *trust*, is fundamental to moving through the levels, and can take two basic forms: interactional trust and institutional trust. Interactional trust is observed when the perception that the company and its management listen, respond, keep promises, engage in mutual dialogue, and demonstrate reciprocity in its interactions. Institutionalised trust takes place when there is a perception that relations between the stakeholders’ institutions (e.g., the community’s representative organizations) and the project/company are based on an enduring regard for each other’s interests.

Securing a continuous acceptance of mining operations in a given community means, “a mining project is seen as having a broad, ongoing approval and acceptance of society to conduct its activities (Prno, 2013:577).” Because SLO requires the recognition of and response to norms,

values, and expectations of the community, and possibly broader society, the *similarities to legitimacy are prevalent*.

Gehman et al. (2017) investigate the congruence between SLO and legitimacy in the current literature, particularly in their respective definitions and usage, and they point out that:

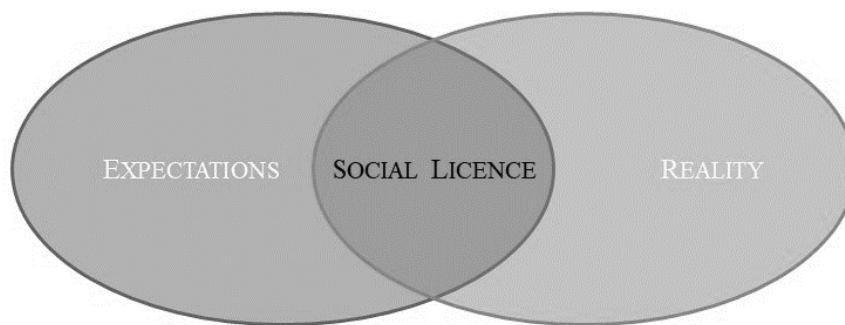
...research into legitimacy building *does not assume linear path-dependence*: a company does not have regulative, then cognitive, and then moral legitimacy with its stakeholders. Legitimacy may be built in such a way, but not necessarily (Bitektine and Haack 2015). Legitimation tactics include ethos (credibility of the proponent), logos (logic of the argument), and pathos (emotional appeal) (Green, Li and Nohria 2009; Harmon, Green and Goodnight 2015). The credibility of authoritative endorsements (that is, media, regulators, influential others) can cause evaluators to passively rely on the judgments of these others, while logical inconsistencies or emotional surprises can cause evaluators to actively reassess the target (Tost 2011; see also Tormala, Petty and DeSensi 2010).

<i>Definitions of Legitimacy</i>	<i>Definitions of Social License</i>
<p>“Appraisal of action in terms of shared or common values in the context of the involvement of the action in the social system” (Parsons 1960: 175)</p> <p>Justification of organization’s “right to exist” (Maurer 1971: 361)</p> <p>Implied congruence with the cultural environment, with “the norms of acceptable behavior in the larger social system” (Dowling and Pfeffer 1975: 122)</p> <p>Activities that are accepted and expected within a context are then said to be legitimate within that context (Pfeffer 1981: 4)</p> <p>An array of established cultural accounts that “provide explanations for existence” (Meyer and Scott 1983: 201)</p> <p>“Social fitness” (Oliver 1991: 160)</p> <p>A generalized perception of organizational actions as “desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions” (Suchman 1995: 574)</p> <p>“The endorsement of an organization by social actors” (Deephhouse 1996: 1025)</p> <p>“Acceptance of the organization by its environment” (Kostova and Zaheer 1999: 64)</p> <p>“A social judgment of appropriateness, acceptance, and/or desirability” (Zimmerman and Zeitz 2002: 416)</p> <p>“The level of social acceptability bestowed upon a set of activities or actors” (Washington and Zajac 2005: 284)</p> <p>“The degree to which broader publics view a company’s activities as socially acceptable and desirable because its practices comply with industry norms and broader societal expectations” (Rindova, Pollock and Hayward 2006: 55)</p>	<p>“Having the approval, the broad acceptance of society to conduct its activities” (Joyce and Thomson 2000: 52)</p> <p>Meeting “social expectations . . . gaining support for the project from concerned groups, or stakeholders, over and above meeting any legal requirements” (BSR 2003: 4)</p> <p>The right of indigenous peoples and other affected parties “to participate in decision making and to give their free prior and informed consent throughout each phase of a project cycle” (Salim 2003: 21)</p> <p>“The demands on and expectations for a business enterprise that emerge from neighborhoods, environmental groups, community members, and other elements of the surrounding civil society” (Gunningham, Kagan and Thornton 2003: 308)</p> <p>“The idea that industrial facilities must comply with tacit expectations of regulators, local communities, and the public in order to continue operations” (Howard-Grenville, Nash and Coglianese 2008: 77)</p> <p>“Ongoing approval within the local community and other stakeholders” (Thomson and Boutilier 2011: 1779)</p> <p>“Society’s moral and political approval, sufficiently widespread and stable to allow legal approvals to proceed and to assure ongoing community support” (Cleland 2013: 1)</p> <p>“A form of social acceptance or approval . . . a socially constructed perception that your company or project has a legitimate place in the community” (Black 2013: 15)</p> <p>“Gaining, nurturing, and renewing legitimacy with local groups, stakeholders and communities” (Raufflet et al. 2013: 2229)</p> <p>“Ongoing acceptance or approval from the local community and other stakeholders” (Parsons, Lacey and Moffat 2014: 84)</p>

**Table 1:** Definition of Legitimacy Versus Social License Source: Gehman et al. (2017)

In the same manner as legitimacy, reality meeting expectations is central to SLO. Looking at the connection, or similarity, between SLO and legitimacy is complicated. Some argue for a more linear understanding of SLO in terms of developing and maintaining positive relationships between companies and communities. Conversely, the activities of SLO and the resultant

legitimacy may be more effective in creating “stock” or future goodwill for their operations in the future. This reflects much of the existing literature on legitimacy that makes a similar connection. When those in authority account for a variety of perspectives by understanding the expectations of affected actors remains key because decisions viewed as legitimate not only enjoy higher levels of compliance but even active support; an influencing factor for the effectiveness of future decisions (Bäckstrand, 2006; Beetham, 2013; Lipset, 1981; Smith, 2007; Tyler, 2006; Wallner, 2008).



**Figure 3:** Social license requires companies to both understand and realize the interests of affected actors

#### 4.1.4 SLO definitions

Around the last two decades there have been many metal mining projects worldwide that managed to operate with raising costs due to social opposition or that have been unable to move from discovery to development because of community opposition or that were suspended or permanently halted. Reasons explaining communities’ decisions include that communities’ expectations were not met, because they do not feel they had a reasonable voice in decision-making processes or because they believe the risk of accidents (e.g. failures of tailings dams as witnessed by many projects around the world) is too high to tolerate. Examples of Australian mine closures where community opposition was a major factor include Timbarra gold mine which closed in 2001, the Stuart Oil Shale Project in Gladstone which was abandoned in 2004, and the Jabiluka Uranium Mine which was never allowed to progress into the production phase of operation (Franks et al., 2010).

Even in mature mining regions such as Chile, where the state has a long history of mineral extraction and can boast progressively higher revenues from mining, public expectations that mining should make a greater contribution to development continue to challenge the legitimacy of the industry (Parra & Franks 2011).

In the mining sector, stakeholders<sup>4</sup>, especially local communities, have emerged as particularly important ‘governance’<sup>5</sup> actors which regularly scrutinize the performance of mining companies and with power and influence, in extreme cases, to suspend or halt a development project, incurring in high costs for the investor (e.g. (Franks et al., 2014) and influencing

<sup>4</sup> Thomson and Boutilier adopt Freeman’s (1984) definition of stakeholders as those who could be affected by the actions of a company or who could have an effect on the company. The stakeholder network, therefore, could include many parties outside a geographic community, such as ethical investment funds, international human rights activists, international financial institutions, and national governments (Boutilier and Thomson, 2011).

<sup>5</sup> The ‘governance’ concept refers to a trend away from state-centric modes of resource regulation occurring in many parts of the world. Use of such term is not meant to suggest that state authority and regulations have disappeared but to signal that decision-making often occurs via the interactions of a diverse and multi-scalar constellation of state, hybrid and non-state actors and institutions (Bakker and Bridge, 2007; Himley, 2010).



company's market capitalization (Henisz et al., 2014). As stated in Enduring Value: The Australian Minerals Industry Framework for Sustainable Development:

*'Unless a company earns that licence and maintains it on the basis of good performance on the ground, and community trust, there will undoubtedly be negative implications. Communities may seek to block project developments; employees may choose to work for a company that is a better corporate citizen; and projects may be subject to ongoing legal challenge, even after regulatory permits have been obtained, potentially halting project development' (Minerals Council of Australia, 2004).*

The concept of SLO has emerged alongside the increasing role of communities. The concept is based on the idea that mining companies need not only government permission but also "social permission" to conduct their business; in other words, it is increasingly evident that obtaining a formal licence to operate from governments and meeting regulatory requirements is no longer enough. Recent research from Australia highlights that the SLO is even increasingly being seen as an important prerequisite for *gaining a formal licence*. As reported by Lacey et al., "when asked about the future evolution of the SLO concept, respondents [representatives of Australian minerals industries] argued that *"SLO and the processes required to gain and hold it were predicted to become core business for companies as a result, and perhaps even a condition of formal legal approval"* (Lacey et al., 2012).

The SLO does not refer to a formal agreement or document but to the *real or current* credibility, reliability, and acceptance of mining companies and their projects. In a general way an SLO can be considered to exist when a mining project is seen as having the *ongoing approval and broad acceptance of society* to conduct its activities (Prno and Scott Slocombe, 2012); not having it endangers the viability of any project as it may be considered socially unacceptable, a phenomenon termed 'social risk' (Joyce and Thomson, 2000).

The SLO is not materially available to companies in ways that are comparable to a regulatory licence for exploration or mining which have specified conditions and obligations, and which are monitored by a regulatory authority typically with power to revoke the licence should conditions not be met. Instead, industry usage rests on an assumption that a 'social licence' can indeed be granted by the communities or stakeholders their operations impact upon (Owen and Kemp, 2013).

The increasing role of the general public and local communities as scrutinizing agents grew out of the widespread dissemination of bad practices, accidents (tailings dam failures, chemical spills) and conflicts with communities during the 80's and 90's up until nowadays, especially facilitated by the role of digital telecommunications technologies. The distrust of communities towards the industry was already identified as a major concern by the MMSD project in 2002:

*"The mining and minerals industry faces some of the most difficult challenges of any industrial sector – and is currently distrusted by many of the people it deals with day to day. It has been failing to convince some of its constituents and stakeholders that it has the 'social licence to operate' in many parts of the world based on the many expectations of its potential contributions" (IIED, 2002)*

Also a pioneer study by the World Bank in 2002 (World Bank and IFC, 2002) already identified the importance of communities and of trilateral negotiations between governments, mining companies and local communities as a way to achieve the SLO. In the last decades the concept has grown substantially in multiple sectors, ranging from the extractive industries (oil, gas, mining, forestry) to public infrastructure development and other sectors (Koivurova et al., 2015).

There *exists no consensus or agreement on how SLO is defined*, and thus there exist many definitions and understandings of what the SLO concept targets and its scope. For example, research of Australia-based mining companies found that surveyed companies define sustainable development and their SLO through 3 broad areas of interest: *environment, social and community issues* (including health and education) and *employment practices* (including occupational health and safety and employee relations). Yet, while front-end positioning about the importance of “earning and maintaining” a SLO was common throughout the reports, none actually defined the “licensing criteria” through which such a licence is granted, instead, in the majority of reports studied (56%), companies take a much broader approach to the social licence, contextualizing it as the aim or desired outcome of their sustainable development activities (Bice, 2014).

Below we provide a **summary of a few different definitions** available in the literature arising from *different contexts* (ordered chronologically):

- SLO exists when a mineral exploration or mining project is seen as having the approval, the broad acceptance of society to conduct its activities (Joyce and Thomson, 2000)
- SLO is the recognition and acceptance of a company’s contribution to the community in which it operates, moving *beyond meeting basic legal requirements* towards developing and maintaining the *constructive* stakeholder relationships necessary for business to be sustainable (Commonwealth of Australia, 2006)
- SLO is not an agreement between communities and mines that can be formalised in any way but, rather, must be thought about as a *descriptor* of the state of the relationship between the mining proponent and the community in which the mine is operating and, therefore, as a *process of continual negotiation*. The process by which social license is expressed is *contextually specific, dynamic and non-linear* (Franks et al., 2010)
- SLO exists when a mine or project has the *ongoing approval* within the local community and other stakeholders. It is rooted in the beliefs, perceptions, and opinions held by the local population and other stakeholders about the mine or project. It is therefore “*granted*” *by the community* and it is dynamic and non-permanent because beliefs, opinions, and perceptions are *subject to change as new information is acquired*. Hence the social license has to be *earned and then maintained* (Thomson and Boutilier, 2011)
- SLO refers to the intangible and *unwritten, tacit, social contract with society*, or a social group, which enables an extraction or processing operation to enter a community, start, and continue operations (Franks and Cohen, 2012)
- SLO refers to the informal and tacit *presence or absence of public acceptance* or support for an activity (Martinez & Franks 2014)
- Social licence is often conceived of as a single licence granted by a ‘community’. We argue that social licence is better conceptualised as a *continuum of multiple licences achieved across various levels of society*. Viewed in this way, we can consider what is needed to achieve social licences at given points along that continuum, and identify the strengths and weaknesses of *specific engagement techniques* in achieving particular social licences (Dare et al., 2014)

Important in the discussion around SLO definitions and scope is who is the constituency granting the licence. In contrast to formal permits, SLO is not granted by a cohesive unit but by a *wide range of stakeholders, local and non-local communities*, what Boutilier calls a ‘non-cohesive stakeholder network’ (Boutilier, 2014). Thus, when talking about stakeholder relationships it is necessary to state that those directly located in the vicinity of an operation (*communities of place*) as well as those with a legitimate but perhaps less immediate interest (*communities of interest*) are both critical informants that shape the nature of social license (Franks et al., 2010). At the same time, the definition of “stakeholders” may encompass NGOs, the media and other kind of organisations. This is a **fundamental issue that should be defined early when creating a SLO framework for the EU**. Network analysis can be used to *prioritise stakeholders*<sup>6</sup>.

A range of literature has attempted to uncover the factors or critical elements that influence the SLO. Yet, and as argued by Prno, there is a limited amount of scholarship specifically focused on SLO, i.e. a need exists for research that uncovers those factors that lead to the issuance (or non-issuance) of a SLO (Prno, 2013).

Moreover, community sentiments and feelings towards projects are important in the outcomes of company-community relationships. As argued by (Prno and Slocombe, 2014), “*community sentiments are the product of unique and changeable local and extra-local circumstances, communities themselves are diverse and heterogeneous, and SLO outcomes may be affected by a range of interactive and dynamic variables operating at multiple scales. This complexity not only makes obtaining a SLO difficult for mineral developers, but also a challenge for analysts and evaluators interested in understanding the origin of SLO outcomes*”.

Acknowledging such difficulties, we have first surveyed the literature to *identify the main existing models* and based on that, drafted a conceptual framework to better understand the different SLO drivers and the interrelationships among them. Both are presented below.

## 4.2 Review of drivers according to literature and existing models

One of the most known and most developed models is the ***multi-level cumulative pyramid model*** developed by Thomson and Boutilier. As previously mentioned and shown in Figure 2, the model suggests that as a mining operation develops legitimacy and then credibility with its local stakeholders, acceptance and then approval of the operation will follow. As this relationship develops into full trust, the local community would be expected to begin to *co-identify* with the mining company and actively support its interests. The four levels of the model acquired sequentially (withheld/withdrawn, acceptance, approval and psychological co-identification with mining project) are separated by three ‘*normative components*’: legitimacy, credibility and trust. Although the model has been accepted and adopted, e.g. recently by the Australian Centre for CSR, the authors' own attempts to empirically validate these hypothesised cumulative relationships have been *unsuccessful* to date (Moffat and Zhang, 2014).

Another well-known model is the ***three strand model*** developed by Gunningham, Kagan and Thornton (Gunningham et al., 2004) where the SLO concept emerged as something of an independent variable critical to explaining why some companies went beyond complying with environmental regulations, while other companies fell short of regulatory compliance. The authors proposed that companies in “closely watched industries” depend upon a multi-stranded license to operate (Gehman et al., 2017):

<sup>6</sup> Note: A network analyses will be considered during a later stage of MIREU (e.g. SWOT analyses in task 4.3).



1. **legal license**, or the regulatory permits and statutory obligations embodying the demands of regulators, legislators, and judges;
2. **social license**, or the demands of local, national, and international environmental activists, local community groups, and sometimes the general public; and
3. **economic license**, or the profitability demands of top managers, lenders, and investors.

Another *model for SLO was created for Australia* by Moffat and Zhang, (2014) measuring and modelling the critical elements of SLO by drawing on social psychological research in intergroup relations. The interviews included measures of project acceptance (i.e., social license), trust in the company, quality of contact with company personnel (i.e., pleasantness), quantity of contact, impacts on social infrastructure (e.g., medical, health, housing), and perceived (procedural) fairness of the process (i.e., whether the company listens, allows participation in decisions, responds to concerns). The study concluded that *procedural fairness and contact quality were the strongest predictors of trust*, being trust also a strong predictor of community acceptance.

The same authors conducted similar analyses in Australia, China and Chile and employed citizens' survey results to evaluate how useful the following measures are in predicting trust in industry and acceptance of the industry:

- **procedural fairness** – the extent to which the industry listens to and respects community opinions, and changes its practices in response to community concerns;
- **distributive fairness** – the extent to which economic benefits from mining are distributed fairly (equitably shared), and each citizen receives a fair share of the benefits of mining;
- **governance capacity** – the extent to which Australians/Chileans/Chinese feel that their (state and federal) governments, and legislation/regulation, can ensure mining companies do the right thing.

Results (selected) are summarised in the table 2:

Questions	Australia	Chile	China
To what extent people <b>accept</b> mining?	High acceptance	Medium acceptance	Medium acceptance, higher in mining regions
Which two <b>economic benefits</b> are perceived as highest?	Jobs and regional employment/training	Job creation, employment opportunities for women	Jobs and regional employment/training
Does mining <b>negatively impact</b> the environment?	Moderate to high degree of agreement, higher in those living in mining regions	High degree of agreement, higher in those living in mining regions	High degree of agreement, higher in those living in mining regions
Do you believe the benefits associated with mining are <b>distributed fairly</b> ?	Medium level of agreement	Less than medium level, less than Australia's results	Less than medium level of agreement, similar to Australia's results
Do you agree that the mining industry and local governments <b>listen and respect community opinions</b> ?	Medium level of agreement (midpoint of the scale used)	Low level of agreement (strong disagreement)	Medium level of agreement

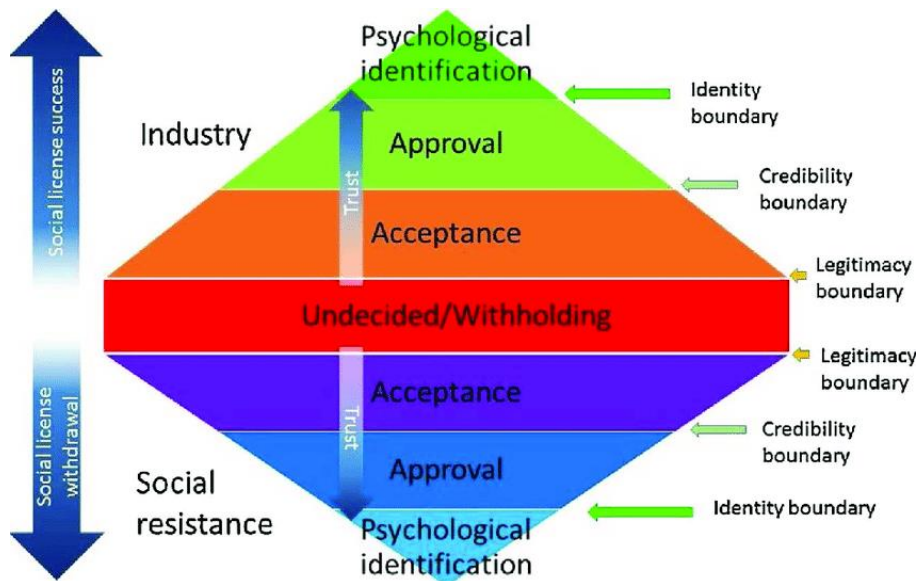
Questions	Australia	Chile	China
Do you agree that people have opportunities to <b>participate in decisions</b> about mining?	Medium/low level of agreement	Low level of agreement (strong disagreement)	Medium level of agreement
Are governments and legislation/regulation able to hold the mining industry accountable? ( <b>TRUST in government/regulations</b> )	Responses overall below the midpoint of the scale (lack of faith in gov., legislation and regulation)	Responses overall well below the midpoint of the scale (lack of faith in gov., legislation and regulation)	Responses were high (strong belief that these formal institutions are sufficiently able to influence how mining takes place)
What is your level of <b>TRUST</b> in important actors in the mining industry (company, government, NGO)?	Trust is low across all actors; NGOs are most trusted, followed by the industry	Trust is low across all actors, little difference in responses from those living in mining regions and those living in non-mining regions	Medium level of trust, participants from mining regions reported the highest level of trust in the mining industry

**Table 2:** Citizens' survey results – Australia/Chile/China; Source: self-elaboration based on Moffat et al., (2014b, 2014a); Zhang et al., (2015)

An important common finding from the surveys is the *importance of a strong governance*. Findings indicate that the *highest level of acceptance* was found among those Australians and Chileans that felt mining had a low impact on the environment and had strong faith that our governments and legislation/regulation can ensure mining companies do the right thing (i.e., governance capacity). The opposite was also true. That is, the *lowest levels of acceptance of mining* were among those people who felt mining had a high impact on the environment and had low faith in Australia's governance capacity.

Other authors have identified and analysed the influence of other factors. Franks and Cohen, (2012) highlight the *central role of mining technology in influencing the SLO*. Prno (2013), based on a comparison of 4 different operations concluded that: (1) *context is key*; (2) a social licence to operate is built on relationships; (3) sustainability is a dominant concern for communities; (4) local benefits provision and public participation play a crucial role; and (5) adaptability is needed to confront complexity.

Another model is the *diamond model* (Luke, 2017) which extends upon Thomson and Boutilier (2011)'s pyramid beyond the withdrawal boundary, to include levels of support for the aims of the resistance movement, mirrored with levels of support for industry. The model (see Figure 4 below) was inspired by the failure of previous models to fully conceptualise SLO withdrawal and was designed to understand processes and levels of SLO withdrawal in the Northern Rivers region in Australia (coal seam gas development project) where large parts of the community identify itself with resistance movements. In the model, those yet to take a social position remain in the central level, labelled undecided/withholding in this model.



**Figure 4:** Diamond model (Luke, 2017)

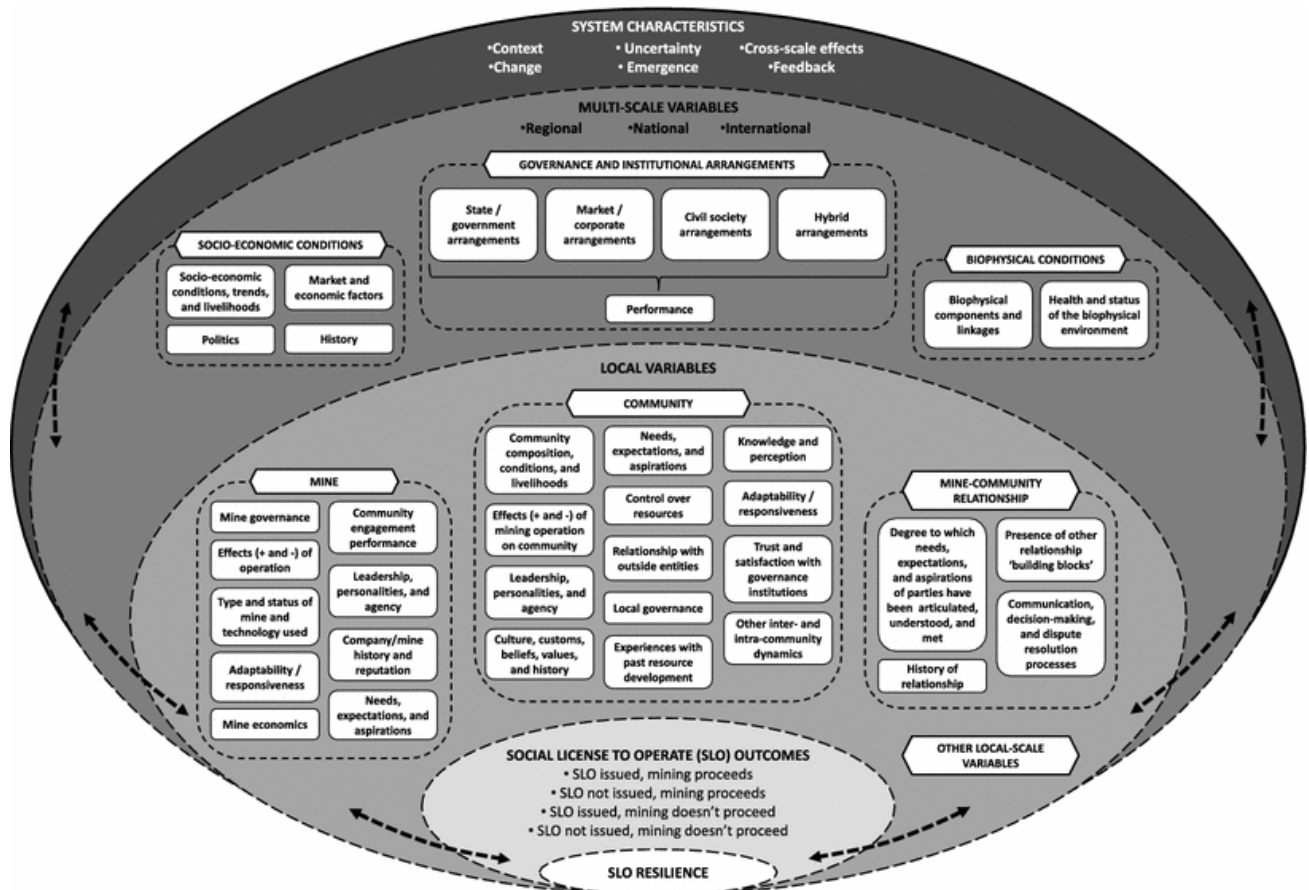
When individuals within the community perceive the messages of the resistance movement to be legitimate, credible and trustworthy, they move downwards in the diamond. The study concluded that an SLO does not hinge on a decision made by an ‘expert’ or even the leader of a ‘stakeholder organisation’, it is a community process of social positioning<sup>7</sup> carried out by (and between) each citizen, based on complex factors relating to values, knowledge, risk perception and social connectivity.

### 4.3 Working global SLO framework

Based on literature previously mentioned and additional one, a draft conceptual SLO framework<sup>8</sup> was drafted and is presented below. Following the framework by Prno and Slocombe (2014) (see below Figure 5), our SLO framework consists of two main types of variables: local and multi-scale (regional, national, international). The variables interact with each other and influence the SLO outcome in each global location. The **focus in this section is on local variables**. At the local scale, primary variables include those associated with a *specific project and a specific location*.

<sup>7</sup> The formation of opinions against or in favour of a specific issue, anchored to existing understandings of similar concepts within social groups.

<sup>8</sup> Similar to a conceptual model, may be understood as a representation of a system which intends to capture a sufficiently large, and in some sense sufficiently complete, part of the real world problem domain.



**Figure 5:** Systems-based conceptual framework for assessing SLO including multi-scale and local variables. Source: Prno and Scolombe (2014)

### Selection of Drivers

Based on the literature reviewed, the following four drivers have been selected due to their importance:

1. Public / community **trust in the company**
2. Public / community **trust in the regulator** and the procedures
3. **Expectations and experiences** of local communities (includes economic legitimacy<sup>9</sup>)
4. Public / community **perception of negative environmental impacts risks** / risk of accidents

These drivers are influenced by the *constant interplay* of multi-scale and local variables, which are described below.

#### **4.3.1 Multi-scale variables**

- Governance and institutional arrangements
  - International legislation and regulations implemented by national governments
  - National government regulation and oversight (legislation and regulations, control & oversight mechanisms enforced by the government, etc.).
  - Non-state governance arrangements (industry self-regulation instruments such as due diligence/auditing, voluntary standards such as the Kimberley process,

<sup>9</sup> The perception that the project/company offers a benefit to the perceiver (Boutilier and Thomson, 2011)

industry conduct codes, firm-level CSR commitments, global initiatives like EITI-transparency, sustainability reporting such as the GRI, requirements by mining associations for membership such as ICMM's adherence to principles, financing institutional guidelines such as Ecuador principles, IFC's performance standards, etc.)

- Civil society arrangements (international activism and protest, involvement of non-local NGOs and labour organizations, international human rights movements, charitable foundations, international lawyer associations, etc.)
- Socio-economic conditions
  - Global market factors (demand & supply, metal prices)
  - Political reforms and macroeconomic conditions at national level
  - Politics, history
- Biophysical conditions
  - Health and status of the biophysical environment caused by extreme weather events, climate change, environmental degradation, and resource depletion may create added stress on individuals reliant on these environments for their livelihoods and increase the potential for harm and conflict.

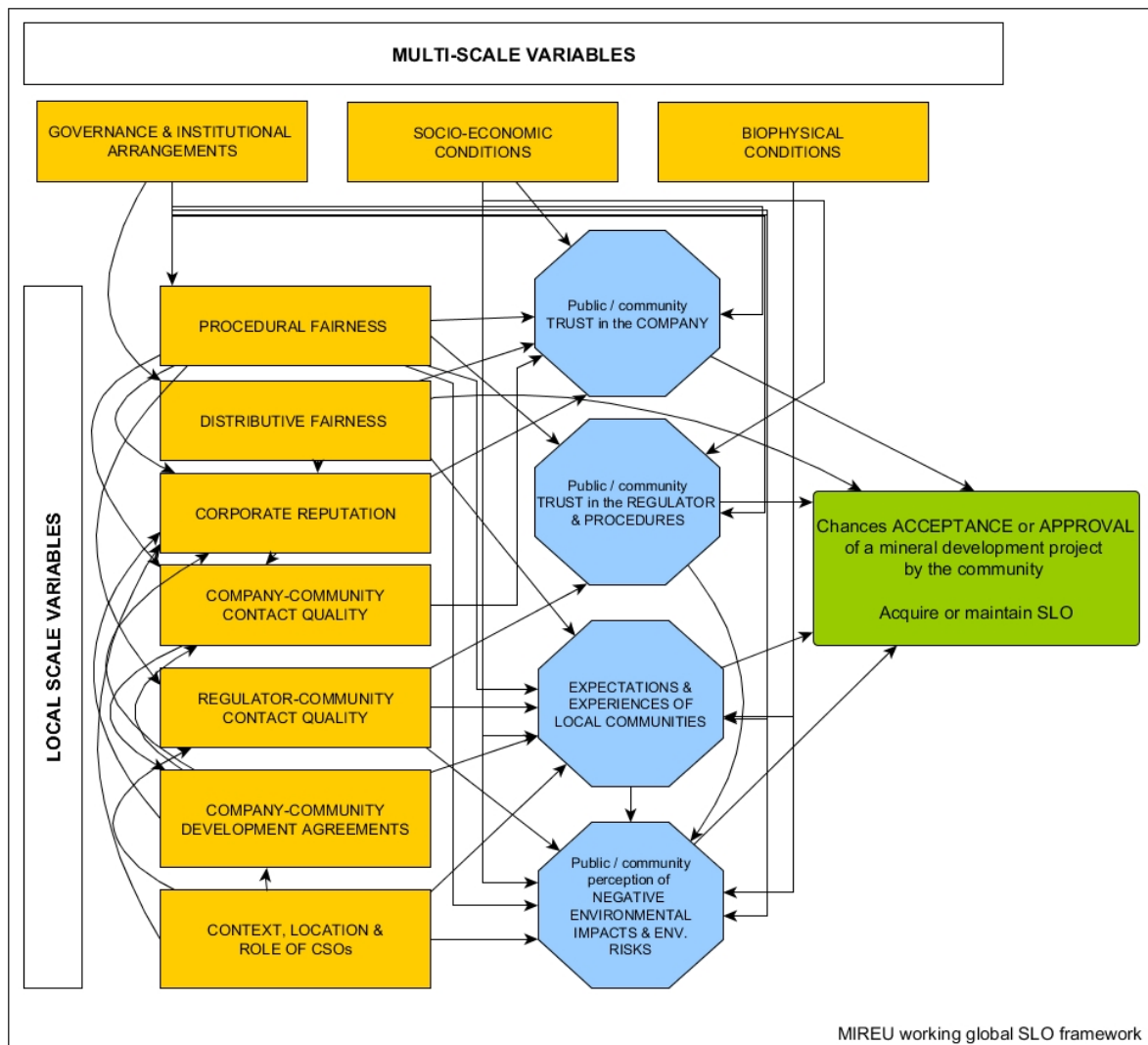
#### 4.3.2 Local scale variables

At the local scale, 7 selected main variables that influence SLO drivers are:

1. Procedural fairness
2. Distributive fairness
3. Corporate reputation
4. Company-community contact quality
5. Company-community development agreements
6. Regulator-community contact quality
7. Context, location & role of CSOs

Figure 6 illustrates the schematic influence of local-scale variables in main selected SLO drivers. Arrows represent the interrelationships between variables and drivers while octagons represent the main four drivers. The entanglement of arrows shows the high degree of interactions between variables themselves, and with/between drivers





**Figure 6:** Schematic influence of multi-scale and local-scale variables in selected SLO drivers. (MinPol).

**a) Procedural fairness (feeling heard and respected)**

Procedural fairness addresses the **quality of the procedures** through which decisions are taken, i.e. evaluating if community members feel they had a reasonable voice or saying during a decision-making process. If individuals feel that they have actively participated in decision-making concerning decisions which affect their livelihoods, they regard the procedure as *fair* (Moffat and Zhang, 2014). In their study Moffat and Zhang (2014) found that procedural fairness was the strongest predictor of trust and thus concluded that community acceptance of mining activities depends on how community members perceive the procedures through which mining companies' decisions are made.

Subsequently, procedural fairness is influenced by the following elements:

- **Public acceptance of technology / social risk:** this element addresses whether communities had a chance to actively participate in the selection of the technology to be applied. Historically the mining industry has been poor at managing the impact of its operations and there continue to be numerous spills and accidents which reinforce the belief that mining companies will not be able to keep their promises and operate assets safely (Pike, 2012). Therefore, ensuring public acceptance of the proposed technology seems relevant.

Research by Franks et al., (2010) in Australia has revolved around the causes which explain why some technologies do not meet public acceptance. Technological traits can have a profound effect on the establishment or maintenance of a SLO. At one level, acceptance of a technology is based on perceptions of the risk of that technology; for example, social license can be influenced by whether the technology is considered to be harmful, benign, beneficial or essential.

According to the authors, the definition of ‘*social risk*’ (the potential for an existing or planned project to have an adverse impact on individuals or groups or, conversely, to be impacted by them) is often narrowly defined to refer only to the risk experienced by project proponents. However, Franks et al argue that the social risk to a project is intrinsically linked to the risk faced by project stakeholders, especially members of the communities in which technologies operate or affect. Thus, the impacts of technologies, or indeed **the perceived risk of technologies**, to society or the environment, **must also be considered as components of ‘social risk’**. Thus recognising that perceived risk is a fundamental component of the social impact of technologies forces one to **reconsider risk evaluation** being conducted solely from the technical perspective that most technologists and engineers possess (Franks et al., 2010).

- **Company-community contact quality:** as put forward by Moffat and Zhang, (2014) procedural fairness is determined by whether people in the communities have opportunities to participate in decisions made by the mining company, the extent to which the company listens to and respects their opinions and is prepared to change practices in response to community sentiment. All such characteristics, including transparency, are analysed under the variable company-community contact quality further below.
- **Discourse neutralization of harmful socio-environmental impacts is counter-active to the attainment of SLO:** as shown by research around the Oyu Tolgoi mining project in Mongolia and the diversion of the river Undai (Meesters and Behagel, 2017), neutralising (the act of neutralising unethical behaviour through normalising language, i.e. making it look normal) and legitimising the river diversion and not taking into account counter-discourses (e.g. by herders, local authorities) does not lead to SLO but to the contrary.
- **Perception that governments respect community opinions:** a study conducted by CSIRO in Chile asked respondents if they believed regional governments listen to and respect community opinion. Results showed a low belief in such statement (less than the midpoint of the scale), with little difference between mining and non-mining regions (Moffat et al., 2014a) (see Table 2).

## b) Distributive fairness

Distributive fairness can be defined as the extent to which economic benefits from mining are distributed fairly (equitably) and each citizen receives a fair share of the benefits of mining. This is strongly influenced by how citizens perceive they receive a fair share of benefits.

- **Results from a study in Australia** highlight distributional fairness as a strong predictor of trust in the industry (Moffat and Zhang, 2014). In other words, the more Australians feel the benefits of mining are distributed fairly, the higher their level of trust in the industry.

- **Results from a study in China** indicated that a fair distribution of benefits leads to greater acceptance. The study found that the strongest positive predictor of acceptance of mining was general *economic benefits* (financial benefits for family, self, and average Chinese), followed by employment and community benefits, then regional infrastructure development. These findings suggest that the more participants felt mining created benefits in these areas, especially general economic benefits as well as employment and community benefits, the greater their acceptance of mining (Zhang et al., 2015).
- A **general literature review** found that the main positive impacts created by mining which affect community acceptance are: job opportunities, income increase and community development (Wang et al., 2016).
- **Results from a study in Papua New Guinea (PNG)** show that one of the key reasons explaining why the Panguna mine failed to secure a long-term SLO was the lack of tangible benefit for Bougainvillians [local communities living close to the mine] from the mine; Panguna represented the single largest source of revenue for the central PNG government, outside of aid from Australia, but beyond the expat community who came to work on the mine very few people in Bougainville benefitted financially from the mine. This was compounded by the fact that the companies running the mine (Rio Tinto and Bougainville Copper) *put very little effort to build relations* with the community and that the environmental record of the mine was very poor (Pike, 2012).
- **Results from a study in Murmansk (Russian Arctic)** highlight the importance of local contents in the decision-making and the importance of staff with local roots. The study argues: “*Even though strategic decisions have been taken in Moscow, the company’s operational decision making, including social policies, was greatly locally based and the top managerial staff used to have strong personal attachments to the local community*” (Riabova and Didyk, 2014).
- **Results from a study in Peru** (Tintaya copper mine) found that communities may defend mining projects if they feel they had a fair share of participation in the project’s benefits. This was achieved via the signature and compliance of a frame agreement (Superneau, 2010).

### c) Corporate reputation

The reputation of a resource extractive company is influenced by the following performative characteristics:

- **Consistency / track record:** Obtaining and maintaining SLO from local communities and other stakeholders requires consistent performance. For some companies, *poor social performance at one site can affect its social licence at another*. A systematic approach will help to maintain consistency within and between operations over time (Commonwealth of Australia, 2006).

In other words, securing a SLO requires that a mining company *convince local stakeholders* that the project is of net benefit to the local community and that it can *follow through* with the promises that it makes. If it has a track record of failing to fulfil promises it only makes it harder to convince local stakeholders, and potential opponents such as NGOs, that it will be able to meet the criteria that it has set out (Pike, 2012).

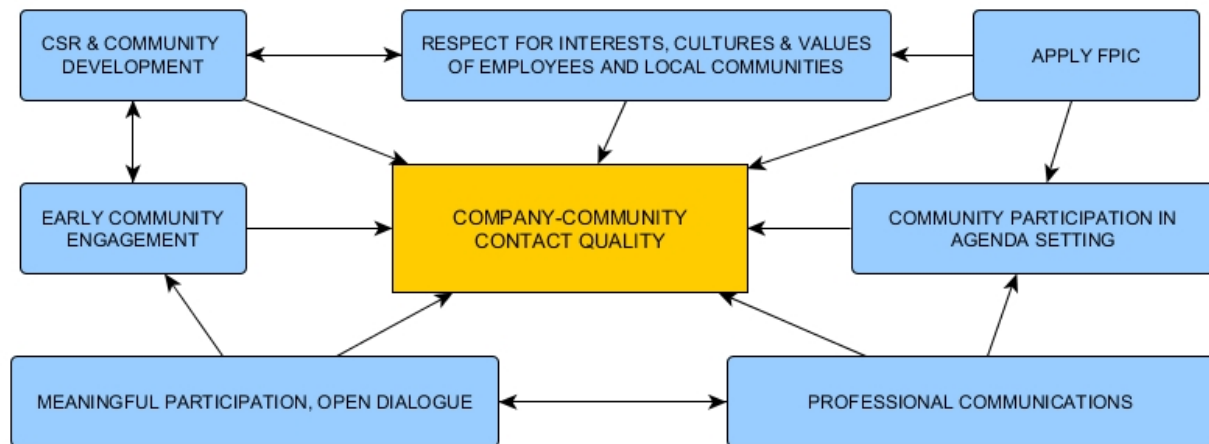


- **Transparency, openness and responsiveness:** Companies that are perceived as *closed and non-responsive* will be much less likely to have the trust and support of a community than those which share information openly, listen and respond to people's concerns, and show that they care about the community and are committed to its development (Commonwealth of Australia, 2006). Some of the governance elements that can positive influence a company's reputation as transparent and responsive include:
  - *Public reporting practices* (financial and non-financial, i.e. environmental, social, fiscal, etc.);
  - *Participatory monitoring programs*, e.g. environmental, mainly for water monitoring (see in Peru the experience of Participatory Environmental Monitoring and Surveillance Committees, Xavier et al., 2017, or in Mongolia experiences by the Asia Foundation);
  - *Mechanisms to publicly disclose how feedback and community grievances are taken into account* and influence the project (company's decision making (this is also part of Procedural Fairness));
  - *Professional communications* at all phases of project development, especially in preparation of and during incidents or accidents.
- **Perceptions of a company's performance:** local perceptions (which may be right or wrong) of performance can *significantly influence outcomes*. If local people perceive a corporation to be corrupt or a regulator to be overly "pro-development" they will be less likely to believe their interests are being adequately protected by such organizations (Prno and Slocombe, 2014). In 2005 a survey was distributed at the annual "Cordilleran Round-Up" Conference in Canada to determine views on what is a SLO, how it is earned, how does a company know if it has been obtained. According to the survey respondents, the top four answers on how to earn a Social License were: maintaining a positive corporate reputation; understanding culture, language and history; educating local stakeholders about the project (Nelsen and Scoble, 2006).

#### d) **Company-community contact quality, incl. CSR**

This variable is called 'interactional trust' by Boutilier, (2017): "*The perception that the company and its management listens, responds, keeps promises, engages in mutual dialogue, and exhibits reciprocity in its interactions*".

In Figure 7 a visual representation of the main variable (company-community contact quality) and its influencing elements is provided.



**Figure 7:** Figure visual representation of the main variable (company-community contact quality) (MinPol)

- **CSR & community development:** company spending in CSR and corporate-sponsored community development programs are important determinants of the contact quality and influences how communities perceive companies and their role in society. Lessons from research in Chile indicates that while community development (CD) can positively influence the social legitimacy of mining and is a necessary factor to achieve community legitimacy in SLO, it is by itself an insufficient factor (Martinez and Franks, 2014).

Moreover, some forms of CD can have a negative impact on the legitimacy of the project, or at least of some of the activities undertaken by the company (Martinez and Franks, 2014). Put differently, the presence of CD does not positively influence the social legitimacy of mining in the presence of negative impacts. Corporate-sponsored CD and its outcomes have the potential to either enhance or undermine SLO, but the relationship between the mine and community, the presence of negative environmental and social impacts, and social development associated with the core activities of the mining project are more significant factors affecting legitimacy (Martinez & Franks 2014).

- **Respect for interests, cultures and values of employees and local communities:** according to ICCM's Principle #3 companies should '*respect human rights and the interests, cultures and values of employees and communities affected by [mining] activities*'<sup>10</sup>. Of interest in this statement are the terms 'interests, cultures and values of communities affected' as it pinpoints to the diversity of stakeholders within a community and, particularly, addresses the 'clash of values' issue. It is often the case (especially in developing countries and those with a strong presence of indigenous communities) that, according to contributions of the ecological economics and political ecology disciplines<sup>11</sup>, one important reason why some groups oppose mineral developments lies in rationalities and systems of values (including valuation languages) different than the ones driving mining companies.
- **Early community engagement:** ICCM's principle #9 asks companies to engage *at the earliest practical stage* with all likely affected parties to discuss and respond to issues and conflicts concerning the management of social impacts. Delaying stakeholder

<sup>10</sup> ICCM (2015) Sustainable Development Framework: ICCM Principles. Revised 2015 version.

<sup>11</sup> See e.g. Martínez Alier (2002) The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation or Martínez Alier (2001) Mining conflicts, environmental justice, and valuation. Hazard Mater. 86(1-3):153-70.

engagement is seen as a company challenge that may endanger acquiring the SLO in Australia (Wall Planning & E.C., 2018).

- **Meaningful participation, open and transparent dialogue, mutual understanding, formal spaces for dialogue:** ICMM's Principle #10 requests companies (members of ICMM) to proactively engage key stakeholders on sustainable development challenges and opportunities in an open and transparent manner, i.e. through open consultation. In Australia, according to Wall Planning & E.C., (2018), some of the elements that determine whether participation is perceived by communities as meaningful are:
  - Failure to allocate sufficient time for relationship building as well as inadequate levels of commitment to stakeholder engagement
  - Underestimating the time and effort to gain a SLO
  - Failure to give reliable information
  - Failure to understand the local community and the local 'rules of the game' and what local communities need; e.g., a study from the Sishen iron mine in South Africa revealed that *"It is apparent that how the mining company understands being a good neighbour is not necessarily how the community members perceive it to be"* (Thulo, 2015).

Lessons from Latin America indicate that, in order for participation mechanisms to be successful, organisers of consultation processes must ensure the active participation of *both formal and informal* community authorities, accredited state and company representatives, and the public (Damonte, 2012). Research from Chile has found that limited formal spaces for dialogue about mining impacts negatively influences SLO (Martinez and Franks 2014). See also the OECD due diligence guidelines to achieve meaningful stakeholder engagement (OECD, 2017).

- **Not understanding the social context is a major risk:** one of the lessons of the North Mara mine (Tanzania) has to do with the acquisition process it underwent. The mine was inherited as part of the acquisition of Placer Dome and neither ABG nor Barrick [companies who acquired it] were involved in the original process of engaging with local communities and ensuring SLO. While it is clear that a multi-billion dollar acquisition will not be put off because of social risks at a small Tanzanian mine, there is a risk inherent in purchasing a mine without fully understanding the social context. *"While ABG (and before them Barrick) has struggled to get to grips with the specific challenges of the North Mara mine it appears that since the shock of the May 2011 incident there is now a concerted effort, along with greater support from the government, to try and tackle the problems of North Mara"* (Pike, 2012).
- **Apply free, prior, and informed consent (FPIC), especially when indigenous communities are involved:** Indigenous peoples are often some of the world's most disadvantaged societal groups and have successfully campaigned for an international regime of rights that extends beyond universal human rights protections. One of the most significant of these protections is the FPIC principle. The requirement to obtain an indigenous community's FPIC obliges governments and, where relevant, companies to ensure that indigenous communities agreeing to a project are informed of the project's likely positive and negative impacts, and are providing their consent free from any pressure or interference and prior to the commencement of the project. Consultations with indigenous peoples should therefore be carried out with the object of obtaining the

community's consent. Communities should also be able to effectively participate in the *project approval process*, which may include negotiating a CDA (Loutit et al. 2016).

- **Professional communications management by the mining company, including adequate management of expectations and aspirations of the local communities:**

The topic of expectations and experiences, and whether there exist a match between them or a gap (see also Figure 3 in Section 4.1.3), has been addressed by many researchers, e.g. research by CSIRO in Australia has revealed that community concerns strongly influence the way the minerals industry operates and how governments regulate it. CSIRO has found that as stakeholder expectations and experiences of mining impacts converge, acceptance and approval of an operation increases (CSIRO, 2018). Conversely, failure to deliver on promises made to the community is a factor that undermines a company's capacity to acquire/maintain SLO (Wall Planning & E.C., 2018). Warhurst (2001) relates the process of community 'granting' SLO to the establishment of meaningful partnerships between operations, communities and government based on a variety of factors that build trust between stakeholders. These factors may include, i.a., the expectation the company will meet the needs of local communities (Moffat et al., 2016).

Conflict has emerged in many instances when local expectations are not fulfilled, sometimes with significant costs to industry (Prno and Slocumbe, 2014). ICMM's report on communications in the mining industry (ICMM et al., 2013) argues that communications is playing an increasingly strategic role in securing the SLO. Based on examples of mining projects that did not adequately manage communications and failed, the report highlights the need to pay attention to the communications sector, especially for mining companies which should destine sufficient resources and staff for adequate communication strategies. Some of the key issues addressed are:

- learning to manage stakeholder expectations, and
  - moving away from one-way communications (e.g. informing, reporting) to effective dialogue (two-way) and business-to-consumer relationships (marketing, social media outreach, digital dialogues, etc.), among others.
- **Developer's support of local institutions:** A failure to engage communities can result in conflict and resistance from local stakeholders. This not only impedes good agreement-making but poses a challenge to sustainability of the industry in that region. While agreements can be structured with the genuine intention of delivering lasting benefits to local and regional stakeholders, it is important that developers invest in the capacity of local stakeholders and institutions to ensure that the relationship and governance processes behind agreements are also supported (World Bank, 2011).
- **Community participation in agenda setting:** Experiences in Latin America show that limited community participation, or processes in which agendas are imposed by the State or private companies, can undermine consultation processes because they fail to gain legitimacy amongst the local population, thereby failing to secure social licence (Damonte, 2012).

### e) Company-community development agreements

A Community Development Agreement (CDA) may be defined as a *legally binding contract* between the holder of an authorization granting the rights to extract minerals, and a community (or communities) that will be affected by the exercise of those rights, that addresses matters concerning community development (Otto, 2017). As defined by Rio Tinto “*community agreements are commercial arrangements. They contain mutual obligations that are both enforceable and auditable*” (Rio Tinto, 2016).

Yet, CDAs may also be informal, i.e. legally non-binding (a ‘gentleman’s agreement’) between the company and its surrounding communities (Thulo, 2015). Some CDAs are intended as an informal means by which the signatories mutually express their views on certain topics, such as in a memorandum of understanding (Otto, 2017).

CDAs can have a variety of forms and names (World Bank, 2011), i.a.:

- Community Development Agreements
- Community Development Initiatives
- Voluntary Agreements
- Indigenous Land Use Agreements (Australia)
- Partnering or Partnership Agreements
- Community Contracts
- Landowner Agreements
- Shared Responsibilities Agreement
- Community Joint Venture Agreements
- Empowerment Agreements
- Exploration Agreements (Canada)
- Impact Benefit Agreements (Canada, Greenland)
- Social Trust Funds (Peru)
- Investment Agreements (Mongolia)
- Benefits Sharing Agreements (Chile)
- Social Responsibility Agreements
- Participation Agreements
- Socio-economic Monitoring Agreements

CDAs between mining companies and stakeholders affected by company projects stand as an opportunity for ensuring the self-determined development of local communities (Loutit et al. 2016). An important advantage of CDAs, whether required by legislation or not, is their potential to become a *useful tool to help define and manage community expectations* (Otto 2017).

Relying on companies to voluntarily assist in community development is *risky*—not all firms are good corporate citizens and not all are competent to know how to offer such assistance. For this and other reasons, an increasing number of *governments are now mandating the use of CDAs or other community development tools in their mining legislation rather than relying simply on voluntary approaches*. The role of governments is especially important where local communities lack capacity or sufficient resources to effectively represent their position (Loutit et al., 2016). For example, Guinea developed a model mining agreement in 2006 that contained extensive CDA provisions. It introduced a new mining law in 2011 containing similar CDA requirements obviating the need to address that subject in future agreements. Like in Guinea, other nations have now addressed community development requirements in their mining laws (Otto 2017).



A study around a success case of the Tintaya mine case in Peru found that communities may defend mining projects if they feel they had a fair share of participation in the project's benefits. The study argues that a main reason behind the success was BHP's implementation (signature and compliance with) a "*frame agreement*" with local leaders through which 3% of profit before tax (or alternatively an annual minimum of USD 1.5 million) would be destined to *social investments* in the Espinar province (Superneau, 2010).

In Greenland the government has incorporated the Impact Benefit Agreement (IBA) as a policy measure in the Mineral Resources Act, which is the central regulatory framework concerning the development of oil and gas resources. The aim of the IBA is to "*enhance and secure the involvement of relevant Greenlandic stakeholders*" and by doing so, increasing the positive impacts of the industrial development on the Greenlandic society. Since all oil companies that want to perform activities in Greenland need to agree on an IBA with the Greenlandic government and the affected municipalities, this forms a good starting point to work on the important *SLO elements of trust and legitimacy* (Smits et al., 2016).

Key elements that may determine success in implementing CDAs include:

- **Comprehensive stakeholder survey:** conduct extensive research and consult widely to identify all communities, and the individuals who will represent them, in the CDA negotiation process.
- **Pre-negotiation agreements:** Develop a pre-negotiation agreement, such as a *memorandum of understanding*, that stage. Commence culturally sensitive orientation programs and/or negotiations training to ensure meaningful negotiations and approval of the final agreement.
- **Propose wide compensation agreements:** benefit sharing means more than financial compensation for use of the land or displacement; it encompasses a *wider spectrum of benefits*, including employment, training, business development, and infrastructure and/or support services. For instance, The Newmont Ahafo Mine (Ghana) CDA contains multiple types of financial benefit sharing. The agreement requires the mining company to pay to a community foundation US\$1 for every ounce of gold from the mine sold, as well as 1% of the company's net pre-tax income, and of any gains made in selling assets that total US\$100,000 or more (Loutit et al., 2016).
- **Arrangement for managing company-community relationship:** In order to secure the effective functioning of the CDA, *leading practice agreements* include governance arrangements for managing the ongoing relationship between the local community and the company. For example, the agreement made in connection with the Ramu Nickel/Cobalt Project (Papua New Guinea) established a foundation composed of representatives from the national government, provincial government, local level government, landowners and the company, to implement the planned infrastructure projects. In Australia the Australian Native Title Act requires companies who have been granted a mining license to negotiate with Aboriginal families and communities that have a legally recognized interest in the land as native title holders or registered native title claimants (Loutit et al., 2016).
- **Stakeholder involvement in deciding CSR spending:** according to the UK-based consulting company Chalkstone an important factor determining the success of CSR lies in the mutual planning of spending destination: "*the experience showed us that communities want jobs, roads, hospitals and clinics, schools, and any other benefit*"

*offered by mining companies, but they want to be actively involved in their decisions. They don't want to be just beneficiaries of someone else's goodwill"*<sup>12</sup>.

For instance, a study from South Africa around the Sishen iron ore mine found that while *"a large number of community members indicated that they welcome and appreciate programmes and projects initiated by the Sishen Mine, they also indicated that contrary to what the mine says, they were not consulted about what their needs consist of. The bottom-up communication approach is key when trying to understand the community's needs, and open and consistent communication between the mine and its community will lead to mutual respect"* (Thulo, 2015).

#### f) Regulator-community relationships

This variable may act as an important determinant in areas with *weak governance*, i.e. developing countries (e.g. Latin America, Africa) where there exist general perceptions of government corruption and governmental mismanagement signalling a lack of trust in regulators and their oversight performance.

- **Trust (or distrust) in the regulatory/institutional system:** as previously mentioned, the perception by citizens of a government's 'governance capacity' (understood as the extent to which citizens feel that their governments and legislation/regulation can ensure mining companies do the right thing), acts as a strong predictor of trust (Moffat et al., 2014b, 2014a) and thus of acceptance of the mining industry.

Conducting research in Chile, Martinez and Franks (2014) found that *lack of trust in the regulatory system and limited formal spaces for dialogue about mining impacts negatively influences SLO*. As shown by Muradian et al., (2003) for the Tambogrande case study in Peru, distrust in institutions and the lack of a participatory procedure for deciding local development strategies create serious difficulties in legitimizing the project assessment and approval.

A study involving 4 field case studies in Latin America and Africa revealed that (host) governments are of equal importance as players in conflict as companies and communities, i.e. governments are seen as a 'contextual factor' that may provide the breeding ground for the emergence of conflicts if not acting strategically (e.g. case of Bulyanhulu in Tanzania) (Andrews et al., 2017).

- **'Pro-mining state' / conflicts of interest:** If local people perceive a regulator to be overly 'pro-development' (or 'pro-mining') they will be less likely to believe their interests are being adequately protected by such organizations (Prno and Slocombe, 2014).

An analysis of the drivers behinds mining-related conflicts in Peru (Superneau, 2010) identified the existence of industry-bias in regulators as a factor that undermines public trust in the neutral and non-biased role regulators should have. According to the study, Peru's federal government defends a pro-mining and pro-investment policy and often and disregards the opinions of local communities. The study focuses on the EIA approval procedure of a large copper project (Tia Maria copper project) and argues that the highest permitting authority (the federal Ministry of Mines and Energy – MEM, regulates EIA permits) is perceived as biased towards the activity, and thus, even if the

<sup>12</sup> <http://www.mining.com/mining-industry-can-now-predict-opposition-projects-spending-single-dime/>

EIA study respects the highest standards, the underlying conflict of interest undermine the creation of a “trust environment”; in other words, ‘*communities perceive that it is already decided that the EIA will be approved, regardless of communities opinions and suggestions*’ (Superneau, 2010).

- **Community participation in agenda setting:** Experiences in Latin America show that limited community participation, or processes in which agendas are imposed by the State or private companies, can *undermine* consultation processes because they fail to gain legitimacy amongst the local population, thereby failing to secure social licence (Damonte, 2012).

**g) Context, location & role of CSOs**

- **History / rate of economic dependency on resource extraction:** The location of new projects is of importance as it is directly linked with the socio-cultural and environmental context where the project intends to operate. Newbold, (2006) argues that locations with a *long history* or economic dependency on resource extraction (e.g. Chile) can invoke different community responses than locations where the activity is new and potentially in competition with, or with the potential to negatively effect, existing industries and livelihoods.
- **History of the area (positive, mining culture, or negative due to mine pollution):** past experiences of communities with respect to the mining industry are highly influential in their perception of the industry / projects as an opportunity or a risk. If *past experiences involved the legacy of mining environmental liabilities* (e.g. acid mine drainage in South Africa Witwatersrand basin, Summitville gold mine in Colorado, USA, etc.) or severe accidents (e.g. Talvivaara in Finland, tailings dams failures in Mount Polley in Canada or in Samarco in Brazil), communities will surely *fear new projects*; on the contrary if good experiences exist, perception of benefits and costs will be different.
- **Geographical proximity to mining operations of stakeholders of relevance:** Results from a study in China about attitudes toward the mining industry concluded that “*In particular, participants from metropolitan areas reported significantly lower benefits in comparison to those from mining and non-mining regions. Participants living in mining regions held a more positive view and were the most accepting of mining*” (Zhang et al., 2015).
- **Indigenous peoples’ territory:** the location of a project within territory controlled or claimed by indigenous peoples will surely require a different approach by mining companies to the entire legal and social licencing procedures, e.g. due to different valuation systems (see next para). There is plenty of literature from Canada and Australia highlighting the importance of adequately addressing indigenous communities as a critical element to obtain the SLO.
- **Rationalities and systems of values other than those driving mining companies:** as previously mentioned, and as shown in cases of mining projects in indigenous people’s territories and elsewhere in Latin America, it is often the case that, according to contributions of the ecological economics and political ecology disciplines<sup>13</sup>, one

<sup>13</sup> See e.g. Martínez Alier (2002) *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation* or Martínez Alier (2001) *Mining conflicts, environmental justice, and valuation*. *Hazard Mater.* 86(1-3):153-70.

important reason why some groups oppose mineral developments lies in rationalities and systems of values (including valuation languages) *different than the ones driving mining companies* (see literature on the ‘incommensurableness of values’ by Martinez Alier) (Martinez-Alier, 2009, 2002, 2001). As indicated by Muradian et al., (2003) for the Tambogrande case in Peru, resource disputes tend to be *interest-centered and value-centered conflicts*; authors argue that Tambogrande seems to be a value-system contest (O’Connor, 1993), where diverse groups within society fight to impose their stance over access to depletable natural resources and a certain conception of “legitimate” decision-making process.

- **Community demographics (demographic factors):** Age, gender, income and number of children were found to be significant, at the 1% or 5% significant level, in explaining respondents preferences for various mining projects in a choice experiment in a mining community in Queensland (Australia) (Ivanova and Rolfe, 2011). The positive coefficients of female (gender), number of children and age implies that the individuals who are female, older or that have more children were more likely to prefer a mining project than individuals who are male, younger or that have fewer children (Wang et al., 2016, p. 201).
- **Role of CSOs:** this is explained in the following section.

#### 4.4 Role of professional ecologic and environmental movements

Civil society organisations (CSOs), including environmental NGOs, (charitable) foundations, watchdogs, industry lobby, grassroot movements/collectives and other organisations have a strategic role in empowering communities and their view on whether consent should be granted to a project or not, which conditions would be necessary, and so on.

CSOs positioning and interests span over a wide range of perspectives, often linked to how CSOs fund themselves, ranging from pro-mining to anti-mining stances, and positions more neutral ones. In any case, CSOs play an important role in influencing SLO drivers as they implement a large array of instruments (reports, campaigns, contact to media, partnerships, participating in litigation, etc.) to inform and support communities and participate in the construction of their stances and arguments to defend their position. The use of many such instruments is compounded nowadays by the role of media, and particularly of social media, as effective mechanisms to reach communities globally.

Global trends in NGO and activist activity reveal that CSOs disproportionately target multinational corporations for their campaigns. A focus on the metal mining sector shows that some of the most active CSOs include Greenpeace, FoE Australia, Sierra Club USA, Global Witness, MiningWatchCanada, WWF International, Oxfam International, among others (SIGWATCH, 2015). During 2014 the top five of the topics that attracted most of the campaigning attention globally were: arctic protection from exploitation, environmental impacts of mining, coal mining environmental and social impacts and impacts of mining on indigenous peoples (SIGWATCH, 2015).

At a global scale some CSOs have played important roles in **exerting pressure to progress with responsible extraction standards** by publicly reporting via campaigns on the poor human and environmental conditions of mining and by pushing ahead bureaucratic stages of standard formation. Well-known examples include the role of the British NGO Global Witness and the Canadian-based NGO PAC in the creation of the Kimberley certification scheme for diamonds (see Bieri, 2010). As posited by Bieri, NGOs shared the roles of being legitimisers, experts, information providers and watchdogs in the implementation of voluntary schemes.



Another example is given by the partnership between Oxfam America and the US-based environmental advocacy group Earthworks and their leading of the ‘No Dirty Gold’ campaign aimed to promote the extraction of ethically sourced gold in the consumer jewellery market targeting Tiffany and other major firms. Earthworks planned a "shame" campaign, aimed at the companies' brands and reputations, betting that firms like Tiffany would not want to be associated with pollution, violence, and exploitation. Tiffany contacted Earthworks before they could launch the campaign (Bloomfield, 2017). The campaign helped catalyse the creation of the Initiative for Responsible Mining (IRMA, [www.responsiblemining.net](http://www.responsiblemining.net)), an effort by NGOs, mining companies and jewellery retailers to develop a third-party, independent system for verifying environmental and social practices at large-scale mines.

Another noticeable role of CSOs has been to **support communities in increasing the knowledge of their rights** e.g. in South Africa (Centre for Environmental Rights and Lawyers for Human Rights, 2014) and **supporting communities wishing to engage in negotiations of contractual agreements** with mining companies, as shown, for instance, by the Canadian experience with indigenous communities and the establishment of Impact and Benefit Agreements (Gibson and O’Faircheallaigh, 2010).

In other cases, CSOs have contributed to **strengthening local communities** through **guidelines aiming for better information-sharing** on communities’ rights and the regulatory framework of the sector as well as skills development and meaningful multi-stakeholder dialogue (Coraid, 2016). Also guidelines have been prepared by grassroots collectives for an effective **opposition to mining projects** by developing ‘counter-industry’ handbooks on how to organise to resist and ‘protect the community’, e.g. in Ecuador (Zorrilla, 2009).

Another important role of CSOs, especially of environmental NGOs, has been in **the construction of the ‘environmental risk’ concept** perceived by communities. Vesalon and Cretan analysed the case of the Roşia Montană gold mining project in Romania where the mining company held the exploration license, finished exploration and made the legal request for the extraction license. Before the licence could be granted, national civil and political organizations supported by national and international environmental NGOs such as Greenpeace, WWF and MiningWatch, expressed their opposition to the project via mobilisations. The main concerns expressed had to do with fears of potential pollution caused by the technique to be employed in the project (gold cyanidation) but also around the displacement of population that would occur as a result of the construction of the gold mine and the creation of a mono-industrial area with no alternatives to mining. Concerns were framed within a historical context in which Romania suffered from two serious environmental incidents (Certej in 1971 and Baia Mare in 2000) involving pollution and fatalities (in Certej) caused by cyanide spills in the tailings dam of mines which are still present in the memory of the Romanians. Framed in a climate of strong tensions between supporters and opponents to the project, the Government did not issue a decision for the granting of the extraction license. In 2015, the Canadian company Gabriel Resources Ltd., the main shareholder at Roşia Montană Gold Corporation, filed a complaint at the Arbitration Court of the World Bank against the Romanian State. The complaint is still unresolved (MinPol, 2017).

Vesalon and Cretan analysed how environmentalists challenged the representation of environmental risk from the use of cyanide (for beneficiation of ore) portrayed by the industry generating compelling counter-discourses (narratives) on risk. In doing so the authors argue that, from a perspective in between scientific positivism and cultural relativism, the concept of ‘environmental risk’ need be considered a ‘hybrid idea’ including a socially constructed horizon, a scientific dimension and a political framework. In other words, the concept of risk should not be solely perceived from the industry perspective, but as a competing representation



emerging from the tensions between environmental movements and political actors, economic interests and the scientific community (Vesalon and Crețan, 2013).

Another important finding by Vesalon and Cretan in the Roșia Montană case was that the perception of risk was changing due to a constant struggle during over a decade between the anti-mining coalition and pro-mining NGOs backed by the mining company attempting to disarticulate the interpretation of risk offered by environmentalists, and supporting industry-related conceptions of risk (arguing the mining project is in line with European environmental regulations, that the project uses the most advanced mining technologies available, etc.).

Finally, another relevant role of CSOs has been in their **acting as plaintiffs against granted exploration or extraction permits**. Many European examples of legal cases where NGOs and citizen grassroots movements acted as plaintiffs are available in the MINLEX's project final report (MinPol, 2017), including cases from Finland (exploration, NGOs and Saami indigenous peoples), France (NGOs, neighbours association related to quarries), Austria, Germany, among others. The ability that NGOs have to participate during a permitting process, e.g. lodging a complaint, is established by the legislation of each country and differs among them.

## 5. THE EUROPEAN PILLAR

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### 5.1 ANDALUCIA, SPAIN

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#### 5.1.1 Historic legacies and contemporary regional context

Andalusia has a long history mining many commodities, and as a region, embraces mining in the present day as well. Unlike in other partner MIREU regions where mining and metallurgy activities are largely in rural settings, in Andalusia, they are often proximate to metropolitan areas. Although the region is generally positive about mining and metallurgy, the past has not been devoid of mining accidents, and they still colour people's perceptions of industry today (i.e. the 1998 breakage of a tailings dam flooded Doñana Nature Area (Biosphere reserve and UNESCO World Heritage designation) with contaminated sludge). There are no indigenous peoples in the region and the main stakeholders are listed in Appendix 8.1.1.

The term 'social license to operate' is not used in Andalusia as society is still anchored in the CSR concept, which is not similar or equivalent to how the Regional Administration views SLO. In Andalusia, the term SLO is more linked to planning and to the previous interactions between the companies and both local stakeholders and the regional administration during the exploration phase.

#### 5.1.2 Political landscape and legislative framework

While mining is not the core of the region's future, the mining and metallurgical industry are among the priorities of the Innovation Strategy of Andalucía 2020. There is no national mining policy framework as every region in Spain (17) plans their individual mining policies. While the basic mining legislation (Mine Act) is made by the State, in accordance with the Spanish Constitution, it is the regions who have competence to regulate mining activities, the industry, environmental requirements, mining planning, the participation of different actors in the process, etc. Andalusia's mining policy is the Regional Government's plan entitled the Andalusian Mineral Strategy 2020 (EMA2020).

The region is currently in a two-step process of changing the permitting/legal frameworks to increase transparency, predictability and efficiency by working with the national level administration to change the Mine Act, and through the development of a new regulation at the regional level to add the Service Directive Principles to the permitting regulations for mining. In terms of changing the Mine Act, the region is developing a framework consisting of main themes to be considered in a new Mining Act with an accompanying proposal on how to solve them. In a future step, stakeholders will be invited to the process. To accomplish this, there is a working group of national and regional mining Administration representatives that are shifting the focus of the Mining Act as it is currently addressed in the Spanish Constitution in order to alter the competence distribution between autonomic regions, add new environmental and land use planning regulations, new worker safety conditions, etc.

Changes are also to be made to the mining permit regulations, i.e. in electronic communication between the Administration and companies in the different administrative processes in order to unify and simplify the process, harmonize the various requirements, better manage and disseminate geological data, regulate the participation of the local administration and local communities in the process, facilitate investment in mining within the region, etc.

Andalusia is also currently aiming to revise land use planning policy by: 1) working with the National Administration to enact a new Mining Law (addressing other aspects than those mentioned above) as the region is currently in the midst of defining protected areas to ensure mineral raw materials supply at local, regional, national and European levels; 2) working on the regional level to include in the Regional Mining Policy EMA2020 an action (known as the Zona Minera) for defining protected areas for mineral resource development; and 3) working with the Regional Land Use Planning Administration to be present, as the Regional Mining Authority and as one of the main stakeholders, in any land use planning process that can affect mining activity and mineral supply.

There are many opportunities during the permitting processes for public participation, but the main grievance mechanisms are through the courts. Usually people trust in formal participation/grievance mechanisms; however, there have been exceptional cases that a specific group fighting against a mine project will force a local referendum. Large companies typically do go beyond what is simply required and have established CSR programmes that interact in a positive way with the society. While a positive development, the Regional Mining Authority thinks there should be more coordination and that this important effort should be planned on a regional basis and have a long-term vision. For example, there are voluntary agreements (Company-Mining Authority) to establish social guarantees that allow miners to seek a new job after an unscheduled mine closure (for a period of 1 year).

The Regional Administration has expressed a *keen interest* in playing a more active role in company-community interactions and in coordinating authorities' communications for mining and metallurgy projects. They also would like to better understand the details of how companies-communities interact at ground level (when do companies first engage communities, how technical are the communications, etc.). Finally, assuming there is a well-defined land use planning system where the region's development is mapped far into the future and a proposed project is consistent with the planned objectives, there is an openness to considering either a 'SLO condition' on a permit, or using a lighter approach, SLO could be a 'value' added to the project during its assessment.

### 5.1.3 Economic effects and influences

Andalusia is the region in Spain with the highest mining-related employment due to the metallic minerals, natural stone, and aggregates production capacity. There are several exploration and five large exploitation projects currently running with several in the pipeline related to metallic mining. While mining and metallurgy are not central to the region's identity or economy, data shows that an increase of nearly 10.000 jobs and a contribution of more than 2.500 M€ in exports/year in the last ten years, are causing the government to rethink mining activity as a new strategic sector. The main obstacle to mine development is access to land, both in terms of specific protections (40% is protected against mining by environmental, cultural prohibitions, etc.) and the atomized nature of land ownership.

The initiation of exploration projects used to be by junior companies, but now the primary explorers are the companies that are operating mines in the region. It is not clear who first negotiates first with communities, but the Regional Administration does not think that exploration companies negotiate with local communities in general, but only with land owners or perhaps with local authorities if they need any specific services or help (workers, water, energy, storage, office, etc). It is believed that large companies respect the commitments reached by the small companies, but there is no knowledge of a written one that has actually been signed. Even before starting a mining project, there are training programs promoted by

both the Regional Administration and companies to guarantee the local workforce will have the necessary skills for employment and the temporary workforce integrates well into society.

#### **5.1.4 Research capacity**

There are many research groups specialised in geology, mineralogy, chemistry, mechanical engineering, but not specifically in mining (exploration, exploitation, processing) or metallurgy. There do not appear to be any academic publications regarding SLO or community acceptance issues.

#### **5.1.5 Socio-cultural dimension**

As stated previously, the term SLO is grounded in the CSR concept. SLO is linked to a specific project and most closely to the exploration phase because it is about the interactions between companies, local stakeholders and the regional administration. However, these interactions are generally not happening today. There is a sense that SLO comes from the society as a whole, that it is achieved when there is social peace, and that now people want to see a net benefit at the local and regional levels (not only the country level). Without this, there likely would be no mine. There are no SLO or related guidance documents or toolkits at the national, regional or municipal levels. International practices also do not seem to have influenced the SLO concept.

Andalusia neither has strong citizen movements against mining, nor does it have an historical tradition regarding communities' influence in development decisions as this role is given to policy makers, and indirectly, to those who oppose and protest against mining. Participation mostly consists of people taking part in the assessment process for a specific development plan. If there are conflicts, in practice, conflict resolution actions are led by companies, without intervention or assistance from public bodies, and sometimes they act badly and late and end up generating worse problems that are much more serious than the initial one. Remedies mainly occur via appeals through the courts. The Los Frailes project (copper-zinc project in Aznalcollar, near Seville, by Grupo Mexico) and Hornos Ibéricos (a gypsum project in Almería, by ETEX) are two examples of projects that have had problems in the courts due to fights against companies in the first case, and complaints from environmentalists in the courts that have involved the mining authority and environment officials, in the latter.

#### **5.1.6 Stakeholder perspectives**

In areas where there are no employment problems, with a reasonable economic and social development, communities are less friendly toward mining activity. Where there is employment scarcity and mining can possibly help develop a region, people tend to be more open to mining. In general, communities want from mining social and economic development focused on infrastructures, roads, railways, ports, electric power, water, telecommunications, broadband, high schools, universities, hospitals, a downstream industry, etc. They want stable work, durable development, respect for the environment and the culture, and for mining to occur in such a way that it allows the reuse of the land for other economic, social, cultural, environmental uses after mining ceases. And above all, they do not want to repeat the mistakes of the past in relation to the socio-economic development of the mining regions and the environmental effects of mining activity.

### 5.1.7 Sources of conflict

The main sources of mining-related conflicts in the region today are related to the environment and include:

- Biodiversity, and specifically protection of the Red Natura 2000
- Water (and waste/mines/quarries that can produce acid mine drainage) is the most important problem, with tailings disposal and mining holes and quarries being sources of major concern too.
- Mine closure, as it was synonymous with abandonment, and society has recorded in its memory the effects on employment, the environment and the economy. Historical memory is one of the main contributors to the bad image mining activity has and it is extremely expensive to overcome. Now the Regional Administration is trying to reverse the problems of historical memory by using existing regulatory tools, such as more economic guarantees for restoration and social damages, and by implementing new requirements related to the capacity of companies to conduct mining in the region (economic stability, technical capacity, organizational capacity, etc).
- Rehabilitation planning - now modern criteria and procedures are in place but the Administration is still slave to the old permits in operation and to the condition of the abandoned mines.

But there is another source of conflict and that is the media. The local media have two faces: one is to emphasize new projects and potential development, the other, which dominates, provides misleading news about mining and assumes the perspective of environmentalists. It appears perceptions and recent history seem more important than reality in forming community opinions and beliefs toward the mining industry.

### 5.1.8 Technological impacts and opportunities

There is no information related to technology.

## 5.2 CASTILLA y LEÓN

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### 5.2.1 Historic legacies and contemporary regional context

Mining in Castilla y León (aka CyL) has a long history, and in contemporary times from the last decades of the 19<sup>th</sup> century to the 20<sup>th</sup> century, it has been dominated by coal mining. In 1986 Spain joined the EU, which necessitated a restructuring of the coal sector, and it has been in decline until the present day. Interest is growing now for other raw materials, mainly metallic and some industrial minerals. In Spain, historic legacies that negatively imprint on peoples' memories for generations tend to involve large-scale environmental disasters (i.e. Aznalcóllar tailing dam failure in 1998) and these also tend to be national issues. On the regional level, while there may be health and safety work-related accidents, such as those involving the coal mines in CyL, these do not appear to have any long term ramifications for either a community's acceptance of mining, or for the broader societal acceptance of mining. Although mining and metallurgy are not central to the region's identity as a whole, it is for some of the provinces or areas, such as the province of León and some areas of Salamanca. There are no indigenous peoples in the region and the main stakeholders are listed in Appendix 8.1.1.

The term 'social license to operate' is not used in the mining sector, but it is affiliated with the concepts of social acceptance and sustainability.



### 5.2.2 Political landscape and legislative framework

The regional administration of Castilla y León strongly supports the mining/metallurgy industry. As noted previously in the summary of Andalusia, the basic mining legislation is defined at the national level (Mine Act), but competences usually correspond to the regional authorities. Land use planning, via the Law of Urbanism of Castilly y León, is one of the major mechanisms to protect potential mining sites. Rural lands can be classified in 10 categories, one of which is specifically set aside for extractive activities. The Extractive category is only implemented in very specific cases, i.e. in practice limited to ongoing exploitations. A different one (rural common) allows mining, among other activities. The other eight categories do not allow extractive activities, even with an approved Environmental Impact Assessment. So, if a company wants to set up an exploitation on land in one of these categories, they have to apply for an urban rezoning to that of the Rural Common or Extractive categories. The rezoning is a process that can last two years or more, depending on the municipality, and it is not always achieved. Hence, the Law of Urbanism is now viewed more as an obstacle for mining activity. There is also limited contact with stakeholders in this process as only those stakeholders in the area subject to planning are consulted. Royalties from mining activities are not regulated so any possible benefits for local communities have to be negotiated on a case by case basis with mining companies and the local authorities.

The main mechanism for community participation is the public consultation process in accordance with the Spanish Law of Mines, the Law of Environmental Impact and specific regulations related to land restoration and residuals management. The Regional Administration does not play a strong role in managing social issues, as they only manage general technical issues in order to make the companies comply with requirements. There have, however, been efforts to increase transparency recently in legislation, the most recent being in 2017, with the approval of the Regional Strategy of Mineral Resources. Most notably, the system warrants that the mining companies must establish at the beginning of their activity in order to ensure the correct restoration at the end of the mining works is currently being improved in order to avoid the use of public money and to raise awareness within mining companies about their environmental responsibilities. Mine closure is important and rehabilitation plans are compulsory. The procedure includes public consultation periods, so municipalities have the opportunity to intervene. There are also soft law measures companies have taken to increase transparency. For example, some companies have implemented the System of Sustainable Mining Management (UNE 22470 and 22480) voluntarily.

### 5.2.3 Economic effects and influences

The mining industry and mining-related research both contribute to the economy of Castilla y León. According to the last published update (MINETUR 2015), in Castilla y León, there are 468 mining exploitations with approximately 85% of them being micro-companies (<10 employees). The vast majority (341) of exploitations are quarries of raw materials related to the building sector (aggregates, some industrial minerals). Companies are mostly domestic, with foreign companies operating only in metallic. There are now only few coal exploitations and those have a small production. In the last 10 years, market conditions have improved leading to the setup of the Los Santos W mine (2008) and Barruecopardo W mine in 2019. Additional projects in the pipeline are at advanced stages.

In the majority of cases, exploration projects are started by junior companies and they are the ones who first negotiate with communities. Negotiations of these junior companies are focused on the scope of exploration works. Larger companies usually have a wider scope (more intensive exploration, exploitation) and they have to scale up their commitments with communities.

The economic impacts from unexpected large mine closures are a concern as they involve many lost jobs, and because of unemployment repercussions, involve negotiations with Staff Unions, companies and the Administration. Environmental issues are not seen as problematic in economic terms because warrants have been established on the part of the companies.

#### 5.2.4 Research capacity

Research is emphasized in CyL with the Faculty of Geology at the University of Salamanca, the School of Mining Engineers in the universities of León and Salamanca, SIEMCALSA, a semi-public company focused on the promotion of the non-energy mining activity, Centro Internacional de Materiales Avanzados y Materias Primas de Castilla y León (ICAMCYL) and CARTIF. Although some academics are working on social acceptance issues, to date there does not appear to be any academic literature published on the topic.

#### 5.2.5 Socio-cultural dimension

Even if SLO is not a defined term in CyL, there is a ‘feel’ for when social acceptance has been achieved and that is when a majority of the relevant stakeholders (especially local communities) agree with the proposed mining project. SLO has to come from the community and not just the political leaders or the most outspoken. It is also contingent on the distribution of local/regional benefits.

The closest social acceptance-related document, at the national level, is the System of Sustainable Mining Management (rules UNE 22470 and 22480), prepared by the Spanish Association of Normalization and Certification (AENOR). When it comes to the regional level, however, none of the guidance from the national mining association is applied.

According to the regional authority, the key expectations of communities include jobs, economic development, safety of people in villages, and that the project itself is safe and environmentally responsible. New mining projects tend to trigger different dialogues than existing projects and these are important because they have more impact on communities. However, for some of those opposed to mining, the only acceptable outcome is either stopping a new mining project or shutting down an existing mine.

There is not much information about company engagement strategies. For example, there does not appear to be a general rule that companies engage stakeholders early and often. But stakeholders do first hear about mining projects from companies.

#### 5.2.6 Sources of conflict

Coal mining restructuring has been, in the last years, a source of conflict due mainly to the loss of jobs. Attempts by some companies to explore the mining potential for shale gas have generated strong opposition in the affected municipalities. Some mining projects, such as the feldspar projects in Ávila (described in the ‘case study’ section) or the uranium project in Salamanca, are controversial as well. In the above cases companies have contacted, to a greater or lesser extent, the local communities in order to solve problems.

The media also is a source of conflict since reporting tends to be biased against mining projects. There are a number of contested mining developments and these are discussed widely in the media. Although the media highlight positive issues such as job creation, if there is a popular response against the mine, they tend to report largely about the concerns of communities and there have been instances when local people are presented as victims of an aggressive plan or policy.

### 5.2.7 Technological impacts and opportunities

Problems in mining can lead to innovation (avoid emissions, pollutants), and technological innovation in turn can facilitate societal acceptance, but it does not work the other way around. Hence, the need for social acceptance does not lead directly to technological innovation.

## 5.3 CORNWALL, UK

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### 5.3.1 Historic legacies and contemporary regional context

Cornwall is located in the southwest of England, and in 2015, had an estimated population of 549,400. The largest contiguous residential area is the Camborne, Pool and Redruth Community Network Area, with around 59,400 people. There are no indigenous peoples in the region and some examples of stakeholders are listed in Appendix 8.1.1. The long-standing trend of outward migration is reversing, largely due to the expansion of higher education provisions and improving employment prospects. While metalliferous mining in Cornwall is thousands of years old, the major period of activity was the late-1700s to late-1800s. Apart from fishing and agriculture, mining and ancillary industries were the mainstay of the Cornish economy and involved all family members, including women and children. Miners were effectively self-employed by mine captains, so the work was hard but could be well rewarded. There was a huge spirit of innovation in the region, with the invention of steam engines and mineral processing techniques, which in turn made a significant contribution to the Industrial Revolution in the UK and beyond. When global commodity prices could not support a domestic industry, many Cornish miners emigrated, exporting mining engineering expertise worldwide.

China Clay has been extracted and processed on a commercial scale in Cornwall since the 1700s, and despite a decline in operations during the last fifty years, it remains a significant raw material and research industry in the St. Austell area of the region.

The Cornish mining landscape, including the iconic engine houses, is unique and comprises a UNESCO World Heritage Site. Mining is at the forefront of tourism and educational agendas and the region has numerous individual heritage attractions and hosts many mining related events. There remains a skilled workforce in mining and ancillary services and the region is host to a large number of commercial and research organisations serving both the UK and global minerals industry.

Mining is synonymous with Cornish cultural identity, remains in living memory and engenders a sense of pride. However, the cessation of mining has created significant social challenges in some areas, especially where operations have shut in the mid- to late-1900s. Mining environmental legacies include soil and water contamination as well as land development constraints and devaluation. Employment expectations and environmental stewardship requirements for a new mineral project would be high.

SLO is not a term that is widely used by regional regulators (e.g. mineral planning or environmental protection) or thought to be recognised by the wider public. Mining/exploration companies in Cornwall tend to be subsidiaries of international companies or are familiar with the term from international practices.

### 5.3.2 Political landscape and legislative framework

There is no single UK regulatory regime for mining. Mining in the UK is governed by different laws and regulatory authorities depending on the nature and location of the proposed mining activity. Broadly, regulation for mining can be categorized by reference to specific minerals – gold and silver, coal, oil and gas, and all other minerals. Other than gold, silver, coal, oil and gas (held by the Crown and/or the State) mineral rights (effectively ownership) can be held by an individual, family or other entity. The mineral owner is often a separate entity to the land owner. Furthermore, the minerals within an area of interest may be vested in a number of ‘owners’, particularly in areas like Cornwall, where mineral ownership can be difficult to trace due to antiquity and a lack of formal cadastral system. Royalties to grant exploration and mining licenses are determined by the mineral owner. These issues can be a significant obstacle to new mineral products.

Although there is no specific UK-wide licensing system for exploration and extraction activities in the mining sector, planning permission must be obtained from a mineral planning authority for the extraction of minerals, and a number of environmental consents and safety systems must be in place in order for any specific mining operation to be conducted lawfully. The national government’s role is mostly constrained to setting national planning policy whereas the majority of decisions in relation to individual planning applications, and the responsibility for enforcement activity, rest with local planning authorities. Both at a regional level (regional planning policies for mineral extraction) and at a project-specific level (granting permission for specific mining projects), planning authorities play a large role in mining projects.<sup>14</sup>

UK mineral projects need various permissions, at all stages, from different regulatory bodies (or separate departments in the same body). Most of these require some form of external disclosure and opportunity for stakeholder comment within the determination process. Many stakeholders first hear the details of a project via regional authorities at the determination stage, once the applicant has expended time and resources on technical designs and supporting studies. The timing and length of the statutory consultation period, and subsequent consideration of stakeholder concerns, can also create a lag, especially when extra studies are required. Furthermore, where proposed developments straddle the jurisdiction of more than one regulatory authority, two disparate stakeholder disclosure and consultation processes can be initiated. In the UK, there is a disconnect between voluntary stakeholder engagement initiatives by a mineral developer and the statutory public consultation process by regulators for permitting. There is room for a more comprehensive and cohesive process within the regulatory regime, which promotes not only a more coordinated approach between government bodies, applicants, statutory consultees and wider stakeholders, but also a more efficient and cost-effective application process.

### 5.3.3 Economic effects and influences

Times have changed. In the 18<sup>th</sup> and 19<sup>th</sup> centuries, the metalliferous mining region in Cornwall of Camborne-Pool and Redruth had some of the highest land values in the UK. The wealth was created by tin and copper mining that helped fuel the industrial revolution in the UK. Today, despite the growing population and subsidies for the region’s economic growth strategies, Cornwall remains one of the poorest regions in the UK and Europe, with the Gross Value Added (GVA) per head of population being around 25% below the European average.

The last metalliferous mine, South Crofty, closed in 1998, but china clay extraction and

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<sup>14</sup> <https://iclg.com/practice-areas/mining-laws-and-regulations/united-kingdom>; website accessed 9 July 2018.

quarrying continue across certain areas of the region. Currently there are exploration projects for tin, copper, lithium and tungsten underway. One of the strong arguments for these projects revolves around job creation – to utilise existing skilled labour and professional expertise and to keep jobs in the area for Camborne School of Mines graduates. More broadly, mining in the South West has been identified by the Cornwall Development Company, Cornwall Council and the Department for International Trade, as a strategic economic growth area. This growth will need to be facilitated by the development of related research, development and innovation in the region.

Economically, Cornwall is still heavily dependent on agriculture and tourism as the two main sectors. Mining tourism is important in Cornwall and has been greatly aided by Cornwall and Devon’s 2006 designation of UNESCO World Heritage Status, which is the largest World Heritage site in the UK. The promotion and preservation of this heritage is key to “local identity”.

### 5.3.4 Socio-cultural dimension

There is high regional awareness of mining owing to the historical context and legacy issues, as well as contemporary businesses and research institutes in Cornwall. This is strengthened by easy access to educational resources, such as:

- Cultural events – variously promoting mining heritage and conservation, management of mining legacy issues, research findings and new exploration/mining initiatives.
- Mining museums – providing tours and workshops for children/schools and information dissemination via ‘Knowledge Transfer Partnerships’.
- Publications – books, pamphlets, online articles, journals and media items on mining heritage themes, often linking post-mining landscape values and tourism.
- Professional societies – providing evening lectures on subjects relating to minerals, mining and local geology, as well as industry-based technical groups promoting best practice.

### 5.3.5 Sources of conflict

The strong mining heritage and predilection for mining in Cornwall is balanced against the region’s equally strong natural beauty and tourism industry and NGOs, who are vocal about environmental issues. There is clearly a delicate balance of stakeholder perspectives that a new project must navigate. Mineral projects, which gain the most support, appear to be those that have been well communicated at an early stage and are situated in areas where former mining was intensive, relevant skills remain and unemployment is comparatively high. These tend to be at inland locations. Where public consultation has been less well planned and there are sensitive environmental factors, communities have reacted negatively. A strong influencing factor is proximity to the coast.

Sources of tension may vary according to the stage of mine development. For example, if the issue is the reworking of an old mine, then residents tend to be supportive. The last mine shut in living memory in the 1990s, despite much public protest. For new projects, community support depends on where, what commodity, *how the engagement has been handled* and what the perceived conflicts are with tourist/heritage/environmental issues. The region has both success and failure stories.

After reviewing many articles and notes on public hearings, the major debates around mining



are related to world heritage and employment/training issues, but project-based environmental concerns (i.e. initial ground instability and noise/vibration) come up in the hearings as well, although these are not necessarily a barrier to a proposed project.

### **5.3.6 Technological impacts and opportunities**

The Digital Economy in Cornwall has been identified as one of the main growth areas of the region. According to a report prepared for the REMIX project, many stakeholders consider that real development opportunities and synergies exist where the mining sector can gain knowledge from other industries, such as through technological developments. The existence of contemporary mining appears contingent on a network of non-mining skills.

## **5.4 LAPLAND, FINLAND**

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### **5.4.1 Historic legacies and contemporary regional context**

Mining history dates back to 1540 when iron-ore mining began, with underground mining starting in the 17th century. Not until 1908, with the discovery of a large deposit of copper ore in Outokumpu in Northern Karelia, did modern mining begin. Lapland is the northernmost region in Finland and the EU, with a land area comprising 25.7% of the country's total. In 2015, the region had 179,997 inhabitants, or 3.3% of Finland's population, and a density of 8.16 persons/km<sup>2</sup>. It is largely rural, considered on the 'periphery' of Finland, suffers from high unemployment, and is a region characterised by out-migration, with a loss of roughly 3,000 persons between 2011 and 2016. Rovaniemi and Kemi are the two largest urban areas with approximately 59,000 inhabitants each. Due to its mineral potential, Lapland has become one of the most prominent regions for the extractive industries at the global level. Northern Lapland is home to the Sámi people, who are the only indigenous people in the European Union. The main stakeholders are listed in Appendix 8.1.1.

The term 'social license to operate' is used widely in Lapland (and in Finland) but the definition is not clear as it is an amalgamation of CSR concepts and general company-community relations. As discussed in the 'Socio-cultural dimension' section, in Finland, SLO is a concept applied both at the national and regional/local levels.

### **5.4.2 Political landscape and legislative framework**

A new Mining Act was enacted on 1 July 2011, outlining, among other things, the exploration periods and compensation levels for landowners. This replaced the previous Act from 1965. As a result, the processing of mining licenses was transferred from the Ministry of Employment and the Economy to the Finnish Safety and Chemicals Agency (Tukes). A permit is required for mining exploration if exploration work results in material damage, harm or intrusion or cannot be carried out with the landowner's consent. Compensation to landowners for mining exploration is also specified. (Redemption permits and permits for uranium and thorium extraction are granted by the Finnish government.) There are a number of provisions that give direct or indirect legal protection to members of the indigenous and non-indigenous local communities (mostly as individuals) affected by mining projects. They have participatory rights under both the mining and EIA legislation, including access to justice (right to challenge the permit decisions in the court). The Mining Act gives them legal protection by requiring that the mining permit shall include the necessary provisions for securing public and private interests (see Section 52 of the Mining Act). It also forbids the impacts that "substantially

weaken the living conditions and industrial conditions of the locality” (Section 48.2 of the Mining Act).

While there are as yet no mining projects in the Sámi Homeland, there is considerable interest in exploration, and currently there are many projects in Lapland’s Reindeer Herding Areas. In 2007, a guide by the Ministry of Trade and Industry entitled *Exploration and Mining in Finland’s Protected Areas, the Sámi Homeland and the Reindeer Herding Area*, which describes the conditions for exploration in Finland’s protected areas and the most important matters to be considered when carrying out exploration and mining in the Sami Homeland and the reindeer herding area in northern Finland. There has also been more recent guidance (2014) published specifically focusing on reindeer herding areas entitled, *Guide to examining reindeer husbandry in land use projects*.

In Finland, there is a strong belief in the legitimacy of regulation and regulatory authorities, and a national level survey in Finland showed that trust in authorities and national legislation is related to the acceptance of mining and plays a role in the development of SLO (Litmanen et al. 2016, Jartti et al. 2014). This is partly why the environmental catastrophe of Talvivaara has become such a bellwether for the mining industry. The largest shareholders were the government and there were many flags along the way prior to the large-scale contamination from the tailing ponds. As a result, the Finnish Network for Sustainable Mining was created as a common platform on which *all stakeholders were meant to come together* and develop standards for the mining industry to ensure such an accident could not happen again. Standards based on Canada’s *Toward Sustainable Mining* protocols have been developed, and the industry is presently in the process of implementing the protocols.

One interesting note is that prior research (interview with Leena Suopajarvi) shows that when local people are evaluating the SLO for one mining project, they simultaneously evaluate the legitimacy of the entire chain of actors involved in the project, including the authorities involved in the decision-making (as was the case of Talvivaara). In the criticism that came out of Talvivaara, one of the main themes was the perception that both industry and the Finnish authorities considered the economic benefits to be more important than the local environment.

### 5.4.3 Economic effects and influences

The mining industry is a significant economic sector in Lapland (turnover 2200 M€). Mineral deposits and new exploration projects are mainly situated in Eastern and Northern Finland, but only two mining projects in all of Finland – Kemi and Talvivaara mines – are under Finnish control. The Finnish extractive sector consists of two different sets of companies: many small quarry and sand/gravel/pit operators and a handful of large companies operating metal and industrial mineral mines. These two sub-sectors are very different economically, socio-economically, in terms of resources to deal with problems and take advantage of opportunities, culture and traditions. The initial stages of mining are more and more done by entrepreneurs, or so called junior companies, well-suited for small businesses.

One of the development cornerstones of Lapland’s Arctic Specialisation Programme is the sustainable utilisation of natural resources and the spearhead sector ‘New sustainable arctic industry and mining’. The implementation mechanism of this is the Arctic industry and circular economy cluster, which works with more than 100 SMEs in the region, the majority of them involved in mining, metallurgy and raw materials operations, and the KATEPAL network on mining industry services. There are many other project partnerships in the region too: Arctic

Business Concept (ABC), Arctic smart mining cluster (AMIC), Mine Facts, and several projects ongoing at the municipal level, such as the REGINA project in Sodankylä.

#### 5.4.4 Research capacity

Within Lapland itself, there is a good deal of capacity in SLO research, both on the social sciences side as well as on the technical side. At the University of Lapland, faculty in the sociology and law departments and researchers at the Arctic Centre have published many articles on SLO. Recently, the University of Lapland has merged with the Lapland University of Applied Sciences (AMK), which has substantially bolstered their technical capacity. AMK has both a mining degree and mining-related educational programmes. Currently, AMK organises courses for mining companies on solutions for energy savings, has a project at Kittilä gold mine, and has been testing the reduction of black coal emissions in mining by mixing in different amounts of organic substance (wood pellets).

#### 5.4.5 Socio-cultural dimension

Social License to Operate as a term is widely used in the mining lexicon mostly due to mining in Lapland being *dominated by Canadian companies who are importing international standards*. There has been a good deal of research to date on what communities care about and what constitutes a SLO in Lapland. There is no specific SLO guidance, but there are guidance documents that touch on the area: those mentioned in the legislation section above, materials prepared by the Finnish Network for Sustainable Mining (i.e. the Toolbox for Local Actions), and Tekes' Green Mining Program.

As the EU's only indigenous peoples, the Sámi play an important role in the development of Lapland. The status of the Sámi was written into the constitution of Finland in 1995. They have, as an indigenous people, the right to maintain and develop their own language, culture and traditional livelihoods. The Sámi Homeland is legally defined and covers the municipalities of Enontekiö, Inari and Utsjoki as well as the Lappi reindeer-herding district in the municipality of Sodankylä. There are about 10 000 Sámi in Finland but more than 60 per cent of them now live outside the Sámi Homeland.

#### 5.4.6 Sources of conflict

The main sources of conflict in Lapland relate to competing industries, and hence, competing land uses. The most significant tension is with the tourism sector, as tourism is all nature-based, but also with reindeer herding, the timber industry, local subsistence activities such as berry-picking and special interests such as hunters. There are many special interests in Lapland, the most well-organized of these are the reindeer herders who belong to the Reindeer Herders' Association. They have taken the initiative in concrete terms to assert what they want from the mining companies (mostly from the foreign companies as the Association maintains they engage earlier and more consistently in outreach) and are the first to have started individually negotiating compensation agreements.

An additional source of conflict is the recent growth in environmental awareness in Finland, which has made mining less popular. Environmental protection has for decades been focusing on emissions, but the mining industry has been actively reducing its emissions of metals and waste-water. The absolute amounts are today low and mostly negligible from a national perspective. In recent years the focus of environmental research and worries for the future has

instead shifted to two new issues - land use and biodiversity. The reasons for this are firstly that the emission problems have to a large extent been tackled, at least when it is practical to do so, and secondly, a more comprehensive understanding of the global mechanisms controlling the biology and ecology of planet Earth has lead researchers to these new areas.

#### **5.4.7 Technological impacts and opportunities**

Lapland is involved in a number of Horizon projects, which focus on technology, such as First-In, NEXT, etc. Technology also is in the forefront of the discussion as a result of Talvivaara, since new untested technology is largely to blame for the failure of the tailing ponds and subsequent discharges to and pollution of the adjacent lakes. In that case, new technologies promising more cost effective solutions for the industry were the problem, but there was a lack of adequate testing and safeguards.

### **5.5 SAXONY, GERMANY**

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#### **5.5.1 Historic legacies and contemporary regional context**

Approximately 61% of the Saxony region is rural and home to only 21.5% of Saxony's total population, a result of early industrialisation. Saxony has a recognized national minority, the Sorbian people, who live in Upper Lusatia within the Free State of Saxony and Lower Lusatia in the federal state of Brandenburg. These regions are dominated by the brown open-cast mining industry, but there is no opposition by the Sorbs to mining. Though a region with a declining population, Saxony is still considered relatively dense and this is a contributing factor in making it difficult for the mining industry. Nevertheless, the Free State of Saxony is still a mining state.

The East of the region is home to an extensive lignite open-cast mining industry consisting of four open-cast mines and nearly 300 small and medium enterprises that produce aggregates, industrial minerals and hard rock. In earlier times, the area served as a test field for in situ mining through the use of fracking and the development of CO<sub>2</sub> caverns. Both gave rise to a thorough resistance of locals, but also to very vocal German and international environmentalists. Thus, while lignite is not a commodity that is considered in the MIREU project, it does affect the dynamics of community acceptance. Due to the enlargement of the lignite exploitation, there have been forced resettlements of entire villages, who support the resistance against those not benefitting from the extraction works. If there are complaints against these forced resettlements, it is not found at this stage of research. The resistance that exists is imported by global activists that come to the area specifically to protest. Please see Appendix 8.1.1 for a list of stakeholders.

The majority of the local population is in favour of mining as mining enjoys a solid public reputation thanks to its centuries-old history and the ever-growing wealth brought to Saxony as a result. Through coal and metal resources, Saxony became the second region in Europe to have been industrialised after England. The region also supports the current return to ore and spar mining and is one of the world's best explored regions from a geological and geophysical perspective. The Saxon State Ministry for Economic Affairs, Labour and Transport is the state's supreme mining authority and responsible for the strategic focus of Saxon raw material policy, with one out of three policies being related to mining and metallurgy.

Social License to Operate is not a term that is used in Germany, but the concept is strongly entrenched and there is even an acknowledged system for rating society's attitudes toward mining. There are three levels in this 'rating system' – rejection, tolerance or acceptance.

### 5.5.2 Political landscape and legislative framework

The Federal Mining Act (BBergG)<sup>15</sup> is the major mining legislation in Germany and is a one-stop shop system (which usually excludes aggregates), as the mining authority is responsible for the entire permitting procedure. Permitting and administrative procedures, however, are handled by the state government itself. Thus, implementation differs from state to state depending on the political stance. Based in Freiberg, the State Mining Authority of Saxony is the official, executive authority for this Act. It grants mining permits for mineral resources to be explored and mined, and also supervises active and rehabilitative mining.

The German Government launched a Federal Raw Material strategy that emphasizes free trade, demands free global access to mineral resources, and promotes resource efficiency without a clear commitment to mining itself. In contrast to this, at the regional level there is the Saxon Raw Material Strategy<sup>16</sup>. With this Strategy, the State Government clearly commits to mining and encourages the mining of local raw materials. The roadmap includes the following primary guidelines and objectives:

- Local primary raw materials: To establish the framework conditions for extracting raw materials in such a way so as to enable profitable mining over the long term
- Secondary raw materials: To establish Saxony as a hub for the reclamation industry in Germany and Europe
- Hub of the raw material economy: To promote networking between stakeholders in the raw material economy
- International corporations: Building contacts to market know-how in raw materials
- Saxon raw material research: To strengthen, expand and enable closer networking of existing structures in university/non-university fields
- Experts for the raw material economy: To boost the training of local and foreign specialists and managers
- Saxon administration: To maintain and adapt existing administrative structures in accordance with the requirements of the raw material economy
- Awareness of raw materials: To work towards a knowledge-based, ideology-free awareness of raw materials in the community

### 5.5.3 Economic effects and influences

In 2017, GDP per capita in Saxony was less than that of Germany (29,200 euros versus 39,545.38 euros); however, Saxony is a region rich in natural resources and successfully established a number of raw materials based ‘lighthouse economies’ after reunification during its transition to a market economy. The back-bone of Saxon energy supply is lignite mining. Lignite is the major source for combustion in power plants, but it is also a principle source of R&D in gasification, lignite liquidation (a potential substitute for crude oil), in refining lignite to base materials and for the chemical industry, which has a hub in the Leuna plants close to Leipzig.

<sup>15</sup> Bundesministerium der Justiz und für Verbraucherschutz, [https://www.gesetze-im-internet.de/englisch\\_bbergg/index.html](https://www.gesetze-im-internet.de/englisch_bbergg/index.html) ; Improving Framework Conditions for Extracting Minerals for the EU, 2010 EC & Planning Policies and Permitting Procedures to Ensure the Sustainable Supply of Aggregates in Europe, 2010 MUL

<sup>16</sup> Saxon raw material strategy



Together with the the huge deposits in North Rhine Westphalia, Germany is one of the principle lignite mining countries in the world. However, the industry is in danger of becoming severely weakend due to the increasing opposition against lignite mining in German society. This antagonism is directly linked to the policy of “Energiewende” and could likely result in the shut down of the lignite combustion plant in order to reach the ambitious targets in CO2 emissions. In the Saxon regions of lignite mining, the steady criticism of environmentalists led to a paradigm shift reflected in new policies that encourage a larger industrial transition of the Lower Lusatia by establishing cluster-like structures of Lithium accumulator factories. Hence, there is now a hub of excellence at the global scale.

Saxony owns significant lithium deposits, some of which are under development. Other occurrences of Critical Raw Materials (CRM), particularly needed for high tech renewable energy production, are also being explored. A number of ore and spar, particularly tin, tungsten, zinc, lithium, fluorite, and barite occurrences, are being investigated at the exploration stage and two licences to establish a mine have been issued by the Saxon Mining Authority. Saxony is still a hub of pyro- and hydro-metallurgy with the smelters Nickelhütte Aue GmbH<sup>17</sup> (Co, Cu,Ni), Befesa (Zn), Muldenhütten (Pb) and Feinhütte Halsbrücke GmbH<sup>18</sup> (Sn); the latter one is one out of only four remaining tin-smelters in Europe. In terms of backward integration of these smelters and fluoric acid production, the renaissance of industrial minerals mining started in 2005 with the re-opening of a fluorspar mine in 2015. Another mining project focusing on lithium is already in the phase of feasibility while further projects are planned. The smelters have special importance in the development of a circular economy since many of the commodities are carrier metals for CRM.

#### 5.5.4 Research capacity

The cluster Freiberg is the raw materials research hub in the Federal Republic and hosts the Helmholtz Centre Freiberg for Resource Technology, the Technical University Bergakademie Freiberg, Fraunhofer Institute, and a substantial number of research-intensive industries committed to developing innovative technologies designed to provide the economy with mineral (especially metallic) resources, and to recycling these in an environmentally friendly manner. GKZ, by generating synergies between the multitude of players, is the principle cluster management, triple helix network composed of industry, research, and administration operating on a global scale.

#### 5.5.5 Socio-cultural dimension

The current perception of mining in Germany is part of a complex interaction between governmental policies and lobbying of national and international environmental groups, where labelling mining as ‘bad’ and ‘harmful’ is one factor within a broader strategic campaign against industry, and at the same time, meant to catalyse a larger societal transformation to green and deindustrialize Germany. This perspective is a logical outgrowth of the immediate ban by the central government (Atomausstieg) on nuclear power after Fukushima, and the same perspective continues with the fight against lignite mining after the EU forced the closure of hard coal mining throughout Europe, which in turn encouraged protagonists. Additionally, as Germany’s share of overall production in the EU is 32%, certain industries increasingly find themselves facing a negative image campaign and these include pharmaceuticals, automotive (Diesel), tobacco, and the chemical industry. Mining ranks 5<sup>th</sup> on the list of ‘bad’ industries.

<sup>17</sup> Nickelhütter Aue GmbH, <http://www.nickelhuette.com/index.asp>

<sup>18</sup> Feinhütte Halsbrücke GmbH, <https://www.feinhuetten.de>

Interestingly these industries are the backbone of Germany industry and consequently the reason for much of the country's prosperity.

Though not as affected as other EU member states, Germany's industrial base is also in decline, which is a consequence of the overall deindustrialization of the EU28. Even if mining is not the main contributor to job creation in Germany, since the country almost entirely depends on its raw material supply from outside the country (except for soda, salt, caoline, and a number of industrial minerals), it must be regarded as "key enabler" for maintaining production and securing an intact value chain. As there are fewer and fewer jobs in mining, knowledge about the industry is dwindling. For mining companies, the loss of industrial acceptance is of major concern as it results in longer, more complex planning and approval procedures, loss of industry and company image and reputation, higher costs for companies, loss of domestic and foreign investors as there are more company closures and relocations abroad, problems in obtaining and retaining professionals due to the lack of opportunities, and the reduction and possible cancellation of state support measures. In addition to this, EU environmental regulations are seen as a tremendous burden and viewed as a more serious problem than even lack of a skilled labour force or knowledge deficit. In particular the smelters, most of them family owned and thus of SME type character, have reached their capacity. Another obstacle to entrepreneurship is the increasing regional, national and EU bureaucracy. The latter is being regarded as a major challenge and one reason for the present loss of acceptance for EU policies and for the rejection of the European concept in general.

During the Saxony region's kick-off for the MIREU project, the presentation by Director of GKZ Working Group "Acceptance" provided recommendations for companies to raise raw material awareness, increase transparency and improve public relations. The recommendations included: employing professional conflict management personnel to facilitate dialogue and negotiate compromises, encouraging the different industry associations to have a focus group on acceptance issues, informing the media and journalists directly and making better use of social media, and making trips to mining sites and to company headquarters. One of the major messages was also that **awareness building starts at school**. A review of Saxony's school master-plans (via several GKZ projects) resulted in "shocking news" about how the entire educational system has been transformed from conveying facts to conveying opinions. Interestingly, this is a phenomenon not limited to Saxony, although education is subject to the state governments. Reference was made to NRW (North Rhine-Westphalia) where – with regard to the lignite mining – business organisations affiliated with the lignite industry are not allowed by law to disseminate and present information material at schools. Only environmental groups, such as Greenpeace or the German counterpart BUND, were allowed to do so. As a result, students are beginning to leave the general education schools with only a rudimentary knowledge of the importance of raw materials for industry and daily life, as well as the basic structure of the mining and extractive industries. The mining industry itself strongly recommends heightening the awareness of raw materials and there are a number of activities that have already been undertaken to build awareness. For example, there is an entire program dedicated to the improvement of raw material awareness in Saxon schools, a direct result of the analysis.

### 5.5.6 Sources of conflict

Sources of conflict are closely related to land use planning and SLO issues. Most conflicts arise because they do not have support from local politicians who may be fearful they will not be re-elected if they support mining activities. Other sources have to do with conflicting land uses,

and especially businesses (tourism) that take advantage of the untouched nature or the cultural heritage. The principle issue is job creation since, after re-unification, unemployment rose to 25%. Modern mining can only contribute a limited number of jobs and consequently people are in favour of incomes that provide a higher number of jobs and infrastructure. Saxony has nominated 22 cultural heritage sites, including the historical mining towns of Freiberg, Annaberg-Buchholz, Marienberg and Schneeberg, plus other mountain landmarks that include objects related to their respective industrial branches. A fact-finding seminar on how to valorise Industrial and Cultural Heritage by GKZ, as part of the MIREU project, found that in Saxony, the *valorisation of mining heritage is compatible with mine resumption*. However, the need to sustain development and raise income levels are still seen as problems, and these findings are consistent with experiences from other existing World Heritage sites.

The media is another source of conflict. Whether it is in politics or the media, the subject of mining is *mostly criticized* and is based less on facts and more on ideologies and emotions. Media coverage emphasizes the lack of transparency and communication from exploration, mining and recycling companies as well as accidents and accidents within companies. This is becoming an increasing problem since most of the media consumption is from the internet, an information source especially fed by, and addressed to, the young generation.

Junior mining companies sometimes find themselves as a central source of conflict. These companies have far less capacity and monetary resources than the majors, yet the expectations in terms of time and resources spent on communities are the same. This is the case with a junior mining company currently interested in developing a tin mine, as the company suffered a dispute with a tourist mine that stopped their activities by legal means.

Finally, there are sometimes *politically-based conflicts* between the automotive and mining industries, since the automotive industry is prominent in Saxony and creates a much larger number of jobs compared to the mining industry.

### 5.5.7 Technological impacts and opportunities

There are many examples of research and innovation in the Saxon mining and processing sector, three of which are presented here.

- Autonomous robots in underground mining<sup>19</sup> have the advantage of operating in extreme environments (heat and humidity), reducing mining costs (no need for air conditioning) and lowering safety risk (application of rescue robot and autonomous mine operation robot). Mobile robot technology assists in autonomous exploration of underground mines, including detailed 3D scans and monitoring environmental conditions of the mine (air and water quality).
- Biomining: Metal extraction with bacteria<sup>20</sup> allows the extraction of low concentrated metals in ores, metals extraction from the dumps of abandoned mines, and recycling metals from electronic scraps.
- Advanced processing: new processing technologies to valorise domestic greisen, pegmatite and skarn ore<sup>21</sup>

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<sup>19</sup> TU Freiberg Informatik department, <https://tu-freiberg.de/fakult1/inf/professuren/virtuelle-realitaet-und-multimedia/forschung/projekte/mining-rox>

<sup>20</sup> Helmholtz, <https://www.helmholtz.de/en/energy/biomining-metal-extraction-with-bacteria/>

<sup>21</sup> FAME – Flexible And Mobile Economic processing technologies – EU HORIZON grant number 641650.

## 5.6 STEREA ELLADA, GREECE

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### 5.6.1 Historic legacies and contemporary regional context

The region of Sterea Ellada is the second largest in Greece totalling 15.549 km<sup>2</sup>. It is home to 5.07% of the total population of Greece with 547.390 inhabitants. The region is geographically well located, as it is proximate to Athens, and enjoys a strong industrial sector, being first place in nickel and aluminium production, and shares important cultural resources (Delfi, Thermopyles). There are no indigenous peoples in the region and the main stakeholders are listed in Appendix 8.1.1. The term Social License to Operate is not used in Greece.

### 5.6.2 Political landscape and legislative framework

Greece's main mining legislation is the national-level Mining Code and the Ministry of Environment and Energy is responsible for issuing permits and licenses relevant to the non-energy extractives industry (NEEI) sector. There are also permits issued at the regional/local level, in which case it is the seven De-centralised Administrations and the 13 Administrative Regions who have jurisdiction. Who issues what permit depends on the mineral type, size of the project/activity, any land use peculiarities of the area of intervention (i.e. frontier area, protected area), and/or the land ownership legal status. Mineral raw materials are separated into two broad categories, and these have important consequences for ownership - metallic minerals, (subsurface or underground) and these do not belong to the landowner or to the state, and quarry minerals, which do belong to the landowner. Exploration and/or exploitation rights for all metallic minerals, except the ones exempted by the State such as energy and radioactive minerals, can be conceded to any interested party.

### 5.6.3 Economic effects and influences

The Greek NEEI (metals, industrial minerals, ornamental stones (including marbles) and aggregates) constitutes an important sector of the economic activity of the country, as it supplies essential raw materials for primary industries and various downstream users. The majority of Greece's mining companies are privately owned. Statistics from 2013 for the mining of non-metallic minerals and basic metallurgy in the Greek economy show that 'mining, energy, water supply and waste management accounts for 584 million euros and is 7.9% of the region of Sterea Ellada's Gross Value Added.

In Sterea Ellada, G.M.M.S.A. LARCO is today the only Ferronickel producer in the European Union from local deposits, covering 5 % of the European market's annual demand in nickel. It is a 100% exporting company and is considered among the most reliable producers in the global nickel market. There are three nickel mines (Euboea, Agios Ioannis, Kastoria) that together have an annual production exceeding two million tonnes. Metallurgy is also present with the Larymna smelter, which has an annual production of 19.000 tones of Ferro Nickel Alloy.

### 5.6.4 Socio-cultural dimension

Sterea Ellada is a region of contrasts both in terms of geography and social and economic conditions with industrial and mining sectors co-existing with agricultural activities and a dynamic tourism industry due to the existence of significant archaeological sites (Delphi) and famous ski resorts (Mount Parnassos and Karpenissi). Sterea Ellada is financially not a strong region and the main issue when it comes to exploration is employment – how many jobs will

be provided. Environmental concerns tend to be less important. While jobs are important, there are also controversies and politicians tend to push decision-making to future electoral cycles.

In Greece, decisions are made at the national level and the stakeholders with the most power are those linked to the central government. Partners in the MIREU project believe that power over mining activities should be given to the regions as they have a close and direct communication with the communities and stakeholders affected by a particular mining project. While more work needs to be done to understand the roles and expectations of stakeholders, one interesting point that was noted was the *desire of local communities for companies to have a plan and to follow that plan*. This is one of the important elements in terms of building trust.

### 5.6.5 Technological impacts and opportunities

Environmental and energy saving technologies would have an impact on a wide range of industries. Sterea Ellada is now trying to replicate a competitive technology industrial cluster approach to facilitate the rapid spread of good practice.

## 5.7 STYRIA, AUSTRIA

### 5.7.1 Historic legacies and contemporary regional context

Styria is a federal state (Bundesland) located in the southeast of Austria, which is divided into 13 districts (Bezirke). In area it is the second largest of the nine Austrian federal states, covering 16,401 km<sup>2</sup> (6,332 sq. mi). It borders Slovenia and the Austrian states of Upper Austria, Lower Austria, Salzburg, Burgenland, and Carinthia. The capital city is Graz, which had 276,526 inhabitants at the beginning of 2015. The Styrian iron ore mine (VA Erzberg - Erz means 'ore', Berg mean “mountain”) is located in Upper Styria near Leoben and is the largest open pit mine in Central Europe. It has been successfully extracted for more than 1300 years and still employed 230 people in 2016<sup>22</sup>. The area around Leoben is the most prominent mining and metallurgy region in Austria having the largest mining operations (RHI Breitenau, VA Erzberg) and processing industry (steel processing, refractories, microchips). It also enjoys high quality research facilities (MUL, Sandvik), a strong potential for tourism, and a number of specialized SMEs. Given the long, positive historical mining legacy in the region, stakeholders tend to be very supportive of mining activities. There are no indigenous peoples in the region and the main stakeholders are listed in Appendix 8.1.1.

Social License to Operate is not a term used in Austria, but the concept of social acceptance (focused mainly on providing jobs and environmental protection) has been around for a number of years. There also does not appear to be much opposition to mining activities in the region. The main challenge for the Austrian mining industry as a whole, like in any EU country, is to secure supplies of high quality mineral raw materials for the needs of industry in competition with suppliers from outside the EU. From the perspective of the MIREU partners who provided input to this section, the key challenges lie in the current land use planning practices/legislation/institutions and environmental legislation, as it is becoming more and more difficult to access the resources.

### 5.7.2 Political landscape and legislative framework

Austria is a Federal State and land use planning is generally under the competence of the nine different provinces (‘Länder’). On the other hand, the Austrian Mining Act is a federal law and

<sup>22</sup> [http://www.kleinezeitung.at/steiermark/5116865/MillionenInvestitionen\\_Der-Erzberg-sprengt-wieder-Rekorde](http://www.kleinezeitung.at/steiermark/5116865/MillionenInvestitionen_Der-Erzberg-sprengt-wieder-Rekorde)



it designates three types of minerals: minerals free for mining (protected by law, e.g. metals), minerals that are the property of the Federal State (e.g. energy raw materials), and minerals that are on the property of the landowner (e.g. sand and gravel) and cannot be accessed through rights provided by law. These rights and claims need to be protected by land use management but reconciling different interests and legislation makes it a complex endeavour.

The Austrian Ministry of Economy prepared the Austrian Mineral Resources Plan (AMRP) as a national master plan to secure the supply of mineral resources and to serve as a planning basis for future mining innovations within the federal states and municipalities.<sup>23</sup> Legally the AMRP is a document of minable deposits, and few conflicts with the plan would be expected as land areas intended for uses other than mining have already been removed. In order to identify these minable deposits, the AMRP encourages the collaboration between enterprises, academia and authorities. The implementation of the AMRP has to be done by the federal states and often becomes a political issue. Changes to the AMRP are only possible if all relevant stakeholders agree, and even then the changes cannot be guaranteed.

There are criticisms, however, of the AMRP. One is that the AMRP has a strong focus on aggregates (for all other materials - ores, industrial minerals - the Austrian legislation gives enforcement rights to the federal authorities and hence the regional implementation of the AMRP is not relevant), and there is a question as to how much 'innovation potential' can be deduced from aggregate mining in a European economy that is knowledge based and requires high-tech to compete with the global markets.<sup>24</sup> There is also a criticism that the policy instrument is just about accessibility and finding conflict free areas for mining since no social impacts were taken into account.

In Styria, the results of the AMRP are integrated into the regional development plan(s). At the regional level, there are designated Raw Material Priority Zones that have been declared as 'mineral protection zones' for land use planning purposes (land use planning is a competency of both the regional and local governments and therefore needs to be coordinated). These provide a methodological approach for the identification and evaluation of mineral occurrences. Special attention is paid to the systematic process to identify conflict reduction zones and the different safeguarding processes used by the land use authorities of the federal provinces. This said, the formal institutions do not appear to have any mechanisms that allow for direct participation in the designation of the priority zones. Interestingly, the national level does not have any enforcement regulations to protect or safeguard the priority zones since spatial planning is not within their scope.

In terms of public participation in the local legislative processes, the local land use planning (LUP) authority is the representative of the 'public' or local stakeholders, but the people themselves do not directly participate. Only in the case of the issuance of a Flächennutzungsplan ("different utilization claims including priority zones") from the local government can citizens then review and comment on the plan. However, they cannot refuse it unless there is a 'strong reason' to do so. Although a land use planning hierarchy exists in Austria, the local LUP authority ultimately does not have that much power as they can only refuse a land use plan if there would be no consideration of their interests.

### 5.7.3 Economic effects and influences

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<sup>23</sup> It was identified as a 'Best Practice Model' by the European Commission, as an example as an active minerals planning policy.

<sup>24</sup> From the REMIX Status Report for Lower Silesia

The Regional Development Program Obersteiermark Ost Regulation No. 89 of 2016 underlines the (national/local) importance of the Erzberg mine and refers also to aspects of sustainability. According to § 3 (6) Regulation No. 89 of 2016, the mining landscape of the Styrian Erzberg (“Bergbaulandschaften”) is unique, and has to be integrated into the economic, cultural and tourist development of the region. The mine creates a unique, artificial landscape. Due to the relief changes, it is a massive intervention in the landscape, which in the case of the Erzberg, is a unique selling point. In addition to the extraction of iron ore, various other uses are currently being implemented on the Erzberg site<sup>25</sup> and the local community is interested in developing a tourism approach “Around the Erzberg” (Bergwelt + Sport + Montangeschichte). Numerous events and leisure activities already take place on the grounds of the mine and attractions for tourists and residents are part of a sophisticated program that aims to bring the mining industry in Erzberg closer to the general public. One of the very famous activities is the internationally known off-road spectacle called the Erzberg-rodeo.

With respect to direct employment within the Erzberg mine, it has recently been increasing with the total number of employees at approximately 230.<sup>26</sup>

#### 5.7.4 Socio-cultural dimension

Montanuniversität Leoben (MUL) is placed in Leoben (Styria) and considers its central future aims to establish sustainability in its value-added cycle, from raw materials to the finished product, on to the disposal of the product and its recycling and reuse as secondary raw material. MUL is a “global centre of excellence” of mineral resources production and processing, metallurgy, high-performance materials, process and product engineering, environmental technology and recycling which are complemented by the following fields of research: energy technology and resource management, safety engineering and risk management, mathematics, natural sciences and engineering, and economics. These unique research fields and key competences benefit from the interdisciplinary environment of the university and close collaboration between departments and institutes.

In the Leoben/Erzberg area of Styria, there is not much community opposition given the long and positive history of the Erzberg mine and associated industries. The land use planning process, by trying to reduce land use conflicts early on, also appears to contribute to the acceptance of mining in the region. In addition, the Styrian Iron Ore Mine is well integrated in an innovative tourism and the broader regional diversification concept. As part of this, visitors can take a haul truck trip through the active open-pit mining area, where drilling, blasting, digging, and hauling is done every day.<sup>27</sup>

#### 5.7.5 Sources of conflict

As in the other MIREU partner regions, the main conflicts are around competing user interests. Though not in the Styria region, but in other parts of Austria, there are a number of conflicts over how to balance the utilization of natural resources with other sources of livelihood, the integrity of residential areas and the protection of groundwater. While Austria’s land use planning policies are recognized for their progressiveness and holistic outlook, there is also an acknowledgement that when it comes to mining, other regions may need to do more when it comes to reconciling competing land uses.

<sup>25</sup> Cp. For instance: [http://www.partizipation.at/fileadmin/media\\_data/Downloads/themen/2010-02-08\\_Re-design\\_Eisenerz.pdf](http://www.partizipation.at/fileadmin/media_data/Downloads/themen/2010-02-08_Re-design_Eisenerz.pdf)

<sup>26</sup> Styria case study prepared by MinPol.

<sup>27</sup> <http://www.abenteuer-erzberg.at/cms/?lang=en>.

According to informal talks with employees of the operating company of the Erzberg mine<sup>28</sup>, many of the residents in the surrounding village called Eisenerz ('Iron-ore') are supportive and give their acceptance. The provision of jobs and, more generally, the long tradition of mining in the region create a positive climate. However, there are also parts of the community that are critical and even hostile to mining. More research will be done into this aspect as the MIREU project continues.

Lastly, an interesting finding from the REMIX project - a phone survey was completed where 2000 people responded how they felt about mining in the region. The results showed that people living close to operating mines had a much more positive view toward mining compared to those living far away.

### 5.7.6 Technological impacts and opportunities

In addition to the history, there are also technological reasons for the success story of VA Erzberg<sup>29</sup>. There have been large investments worth tens of millions of euros, such as the new fine grain preparation and the structural technical connection of the production processes. There also was an EIA prepared primarily in order to evaluate new technologies, i.e. in 2017, an EIA entitled *Modification of Pelleting Plant: Extension of extraction and storage facilities; Co-use for steelworks slag* was approved and a permit issued that same year<sup>30</sup>. In addition, a research centre (Zentrum am Berg) has been constructed on the Erzberg mine site at a cost of approximately 30 million euros.

In November 2016, an EU project (SLIM/ <http://www.slim-project.eu/>) was launched with the aim of minimizing the impact of explosions at the Erzberg on settlements in Eisenerz. As the location of the mine is within the city of Eisenerz, special techniques are required to assure low environmental impacts. Additionally, the geological situation of the ore body is a challenging issue for the mining engineers and therefore selective mining processes have to be applied.

## 5.8 (UPPER and) LOWER SILESIA, POLAND

### 5.8.1 Historic legacies and contemporary regional context

The Lower Silesia Voivodship is one of 16 voivodships established after the administration reform, in 1999. The region is located in the southwestern part of Poland - in the west it borders Germany, in the south the Czech Republic, and in the east the Opolskie Voivodship. In area it amounts to 19,947km<sup>2</sup> which is 6.38% of Poland's total land area. With a population of 2,876,627 people, it represents 7.54% of the total population of Poland and has one of the highest rates of population density: 144 persons per km<sup>2</sup> placing it 4th in the country. Lower Silesia is one of the wealthiest regions in Poland and rich in natural resources such as copper, silver ore, brown coal, road and construction stone (over 50% of the national deposit), fire clay, granite (largest deposits in Poland) and natural gas. The mining industry is one of the most significant in the Lower Silesian economy and well-developed transport infrastructure, tax allowances and other preferences attract foreign investors, which in number are growing each

<sup>28</sup> Angelika Brechelmacher during the monthly WP4 Skype call. She will interview some of the opposing voices as part of the SLIM project.

<sup>29</sup> The Erzberg also contains a tunnel research in the "centre on the mountain."

<sup>30</sup> [http://www.umwelt.steiermark.at/cms/dokumente/11140909\\_9176022/7941dcfc/ABT13-Pelletieranlage%20Erzberg%20C3%84nderungen-Genuehmigungsbescheid-2017-07-14\\_SIG.pdf](http://www.umwelt.steiermark.at/cms/dokumente/11140909_9176022/7941dcfc/ABT13-Pelletieranlage%20Erzberg%20C3%84nderungen-Genuehmigungsbescheid-2017-07-14_SIG.pdf) ("Der VA Erzberg GmbH, Erzberg 1, 8970 Eisenerz, wird die behördliche Genehmigung für das Projekt „Änderung Pelletieranlage: Erweiterung der Förder- und Lagereinrichtungen; Mit-verwendung für Stahlwerkschlacke“ erteilt.“

year. In 2009, the region took second place in Poland regarding the number of companies with foreign capital participation.<sup>31</sup> Mineral exploitation has been carried out for centuries and many old ore mines that have been rebuilt and re-launched have been preserved in relatively good condition to this day. Of 11 active mines, approximately nine are open to the public. Lower Silesia is exceptional in terms of the number and diversity of available post-mining underground facilities, and there are also numerous mining and metallurgy museums and historical sites. Even with such a rich mining history, however, there are no UNESCO World Heritage listed sites related to mining and metallurgy. There are no indigenous peoples in the region and the main stakeholders are listed in Appendix 8.1.1.

Upper Silesia is included here since Rathdowney Resources' Olza Mine is the case study for Poland, and it is located in the region. Project Olza is approximately 45 km from Katowice, the capital of the Silesian Voivodeship. The region ranks 14<sup>th</sup> in the country in terms of area and 2<sup>nd</sup> in terms of population. Nearly 12% of the total population of Poland live in this relatively small territory of 12,333 km<sup>2</sup> and almost 8.5 million people live in a 100km radius of Katowice.

Social License to Operate as a term is not used in Poland but the idea of social acceptance does seem to be fairly well entrenched.

### 5.8.2 Political landscape and legislative framework

There is no mineral policy on either the regional or national levels. Currently the Polish government is addressing this topic and the draft State Mineral Policy (Polish abbreviation: PSP) is in the consultation stage now. The PSP is based on nine main pillars and each of them is the subject of separate meetings and discussions between representatives of the *central government, local governments, scientific experts and industry* (up to 500 participants in each meeting). The nine pillars are as follows:

1. Demand of the domestic economy for minerals.
2. Obtaining raw materials from mineral deposits and the heat of the Earth.
3. Obtaining raw materials from waste, their substitutes as well as reclamation and remediation.
4. Obtaining scarce mineral resources through importation and international cooperation.
5. Legal conditions of the State's raw materials policy.
6. Dissemination of knowledge about geology, mining and mineral resources.
7. Institutional framework for the development and implementation of the State's mineral policy.
8. Risk and investment planning.
9. Improving the tax and fee system.

As mentioned above, there is no mineral policy for Lower Silesia. Documents which shape regional development policy include: the Development Strategy of the Lower Silesian Voivodeship (adopted in 2013) and the Voivodeship Spatial Development Plan (adopted in 2014). Both documents have a 2020 perspective. The Spatial Development Plan is a territorial extension of the Strategy, but it should be noted that in contradiction to local land use plans, which are an act of local law, these documents do not bear legal obligations.

According to law, the boundaries of the documented mineral deposits must be presented on the Voivodeship Spatial Development Plan, and local land use plans must comply with it, i.e. also

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<sup>31</sup> <http://dcrm.eu/wp-content/uploads/2010/11/Lower-Silesia2.pdf> accessed 16 July 2018.

show the boundaries of documented mineral deposits. However, this is not the same as actually prohibiting non-mining related land uses, and hence, it is this ‘grey area’ that is the source of the greatest conflicts. On the other hand, if someone wants to develop a mineral deposit that is designated for mining within the local land use plan area, the submission of a local land use plan would likely be very welcome.

The Development Strategy for Lower Silesia states that the Voivodeship policy should be directed at creating industrial processing plants, including copper and silver, and counteract the export of non-processed non-renewable natural resources. Work on new documents are underway and it is expected that both the Development Strategy for the Lower Silesia 2030 and Spatial Development Plan 2030 will be adopted later this year (2018).

As part of the process to obtain a mining concession, the local community has the right and the opportunity to express their opinions under administrative procedures related to the Study on the Preconditions and Directions for the Spatial Development of the Commune and/or the Local Land Use Plan, as well as the Environmental Decision for investment. However, at none of these stages submitted applications and comments have to be considered, nor are they subject to appeal to the administrative court. Obtaining a concession for the mining of mineral resources from deposits must be agreed with the head of the commune (wójt), mayor or city president and the basis of this is the Local Land Use Plan, or in the case of the absence of it, on the basis of the Study on the Preconditions and Directions for the Spatial Development of the Commune. In simplistic terms, if there is a need to buy private land to build a mine, it is purchased at fair market prices; however, this issue is much more complicated in reality. For example, in the case where minerals belong to the State e.g. copper, or lignite, the owner can be expropriated if he does not want to sell the property voluntarily. Usually the owner dictates the price of the land, but in the case of expropriation, the appraiser performs a valuation.

### 5.8.3 Economic effects and influences

In the Lower Silesia Voivodship, over 55% of all employees are connected with the service sector, 35.15% work in the industrial sector and 9.48% are involved in agriculture (2008).<sup>32</sup>

The raw materials base of Lower Silesia has economic importance for the development of the region, both because of the nature of the minerals and the size of the resources. Ore deposits and energy mineral deposits (lignite) are strategic for the regional economy and the national one too. The largest mining companies in Lower Silesia are KGHM Polska Miedz SA (their copper deposits are of the highest economic importance) and the Turow Lignite Mine (lignite is the second most important economic extractive resource), which operates under the Polish Energy Group. In the northern part of the province there are deposits of natural gas and an underground gas storage. In addition, there are numerous rich deposits of high quality sands and gravels. The region also has copper smelters.

The tourism industry is now also developing as the region possesses significant and diverse deposits of mineral and therapeutic waters as well as a rich cultural heritage (one quarter of all Polish palaces and castles are located in Lower Silesia).

### 5.8.4 Research capacity

Higher education, research and development institutes are strongly represented in the Lower Silesia region and approximately 119,000 students attend both technical and humanistic universities. The most important university in the Lower Silesia region is Wroclaw University of Science and Technology (WUST). Moreover, WUST has provided higher education in the

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<sup>32</sup> <http://dcnr.eu/wp-content/uploads/2010/11/Lower-Silesia2.pdf>



subject of mining for over 50 years and it also collaborates with companies in the mining industry. The main research and development institutes are the KGHM CUPRUM Research and Development Center and the Poltegor Institute, both of whom provide quality knowledge in field of underground and open-strip mining.

Research capacities in the Lower Silesia region may be defined by a number of international and domestic projects. The most important mining projects are: Horizon 2020 (e.g. Integrated process control based on distributed in-situ sensors into raw material and energy feedstock), REMIX, CircE (European regions toward circular economy) or MineLife.

### **5.8.5 Socio-cultural dimension**

There is no special SLO strategy in Poland, but this does not mean that efforts to obtain social acceptance are not taken. There is also a growing interest in SLO on the part of research institutions, one of which is AGH University of Science and Technology, where Mining and Geo-engineering Faculty and doctoral students have been researching the topic. Three regions (Lower Silesia, Upper Silesia and Małopolska) connected with metals extraction (copper, lead, zinc, silver) are the subject of case studies. Those cases will include surveys carried out among the residents of the three regions where either the mining and metallurgy industry is already operating, if there is a planned project to be developed, or if there is a project that has closed down and is inscribed into the UNESCO list. The first survey was conducted last June (2018) but only 30 citizens took part; therefore, the author will repeat the survey. In the case of active mines and smelters, research results, in the form of opinions and feelings of the local community, will be compared with the assumptions and information provided to the public by mining companies. This comparison will be made in order to check the impact of the CSR strategy on the level of social acceptance.

### **5.8.6 Technological impacts and opportunities**

The Walbrzych Raw Materials cluster was established to help organise regional raw material companies around the area of advanced material technologies and to cooperate more in the business – science – local government axis. The cluster was formed in part due to an emphasis in Silesia's smart specialization strategy focusing on 'Natural and secondary raw materials'. As part of this, there is a focus on everything from integrating systems for monitoring threats in the environment of a mining plant, to improving technologies for the recovery of useful materials; to furthering advance materials (powders, microstructures, nanostructures, amorphs).

## **UPPER SILESIA, POLAND**

While Upper Silesia is not currently a region that is a partner in the MIREU project, and not a region that has been mapped for D4.1, there is an interesting case study of Rathdowney Polska's Project Olza (in Upper Silesia) that is included in the case study section of this deliverable. As the project proceeds, the region of Upper Silesia will be included in the MIREU SLO work, and potentially, more formally in the MIREU project itself.

In the Appendix to this report, the case study of Rathdowney Polska's Project Olza is provided. While it is considered a good example of stakeholder engagement, there is also opposition to the project, and the case study in the Appendix focuses on this aspect. To provide some background for the project, it is in a Brownfield mining district adjacent to the AGHB Pomorzany Mine which has been operating for over 40 years. The Olza mine will be connected by rail to the operating AGHB smelter complex and port of Gdansk. Rathdowney Polska has appointed a senior Environment and Community Relations manager and maintains they have

had ongoing engagement with all levels government, residents and other stakeholders since 2011.

## 5.9 Summary

Table 3 below provides a summary of important features of the surveyed MIREU regions. The table indicates in the 'Region' column where a long mining history is part of the region; the other four columns summarise the key findings of the informal PEST analysis.

Region	Political landscape and legislative framework	Economic effects and influences	Socio-cultural dimension	Technological influences and opportunities
Andalucia / Spain Long mining history	<p>Innovative strategy of Andalusia 2020</p> <p>Andalusian Mining strategy 2020</p> <p>Regions having competences to implement mining laws</p> <p>LU zone mineral</p> <p>Public participation during permitting process; courts</p> <p>Voluntary agreements to establish social guarantees</p> <p>Proactive regional mining administration</p> <p>SLO conditions on a permit discussed</p>	<p>Highest mining related employment, high production</p> <p>Mining jobs on the increase; mining sector 2.500 M€ exported per year, mining new strategic sector</p> <p>Main issue for mining sector: access to land; 40% for environmental protection areas, land owner issue</p>	<p>SLO is grounded in CSR concept; no SLO definition</p> <p>Participation mostly in assessment process for specific development plan</p> <p>Downstream industry</p> <p>Conflict sources: natura2000 zones, water/tailings, mine closure</p>	No information received
Castilla y Leon / Spain Long mining history	<p>Regional Strategy of Mineral Resources &gt; mine closure, rehabilitation plans, public consultations</p> <p>Strong support of mining regional administration</p> <p>LUP / Law on Urbanism, protection of potential mining sites</p> <p>Royalties from mining are not regulated, only case by case</p> <p>Community participation via public consultation / mining law</p>	<p>468 mining exploitation, micro companies</p> <p>Exploration via junior companies, first negotiation with communities</p> <p>Research/School of mining engineers</p>	<p>No SLO but affiliated with concepts of social acceptance and sustainability</p> <p>System of Sustainable Mining Management, rel. document</p> <p>Source of conflicts &gt; media</p>	Need for social acceptance does not lead to technological innovation
Cornwall / UK	<p>Different sources of law</p> <p>Mining planning authority, national vs local responsibility</p>	<p>Exploration projects</p> <p>Heritage discussion</p>	Strong mining heritage	Mining influences technological development

Region	Political landscape and legislative framework	Economic effects and influences	Socio-cultural dimension	Technological influences and opportunities
Strong historical context	Regional planning policies for mining  Disconnection between voluntary stakeholder engagement		Conflicts > nature protection and tourism	
Lapland / Finland  Strong historical mining context	new Mining Act  Compensation to landowners  local communities having participatory rights under both mining and EIA legislation  Mining Act gives communities legal protection by requiring that the mining permit shall include the necessary provisions for securing public and private interests  Finnish Network for Sustainable Mining - common platform on which all stakeholders were meant to come together	considerable interest in exploration Sámi Homeland  mining industry is a significant economic sector in Lapland (turnover 2200 M€)  Lapland's Arctic Specialisation Programme > sustainable utilization of natural resources  Arctic industry and circular economy cluster, > 100 SMEs  University of Lapland / Arctic Centre	SLO is a concept applied both at the national and regional/local levels  no specific SLO guidance but Finnish Network for Sustainable Mining (i.e. the Toolbox for Local Actions), and Tekes' Green Mining Program  EU's only indigenous peoples, the Sámi  main sources of conflict in Lapland all relate to competing industries, and hence, competing land uses	Lapland is involved in a number of Horizon projects, which focus on technology  Technology in front of discussions related to environmental risks after the Talvivaara accident
Saxony / Greece	Saxon Raw Material Strategy / considers primary and secondary raw materials	94 mining/quarrying companies (SMEs)  Exploration activities  Strong metallurgy industry  Research > Cluster Freiberg (GKZ)	Mining ranks 5 <sup>th</sup> on the list of bad industries (although mining is important for economy)  Loss of industrial acceptance for mining companies  LU conflicts for mining companies  Conflicts with media	Research and innovation, many examples
Stereia Ellada / Greece	Mining Code	Non-energy extractive industry important for Greek economy  LARCO, only Ferro nickel producer in EU  Smelter  Exploration relevant if jobs are provided	Desire from local communities for companies to have a plan and follow the plan	Wants to develop a cluster approach
Styria / Austria	Strong presence of the Austrian Mineral	Traditional Erzberg mine at the center of	Little community opposition to mining	Technology (and investments)

Region	Political landscape and legislative framework	Economic effects and influences	Socio-cultural dimension	Technological influences and opportunities
Long mining history - Erzberg mine, positive examples	Resources Plan as tool to reduce potential conflicts with land uses other than mining, but criticism (focus only in aggregates, no innovation potential)  No direct participation of the public in LUP decisions; little power of local LUP authority in the national hierarchy	tourism initiatives (e.g. 'Erzberg rodeo') and social events	in the area close to the Erzberg mine; in line with REMIX phone survey results: people living close to operating mines had a much more positive view toward mining compared to those living far away  Main issue: competing land uses	supporting its development) played important role in the success of the Erzberg mine; currently SLIM project is working on a new technique to minimize impacts of explosions
Lower Silesia / Poland  Rich in mining  No SLO	No mineral policy at national/regional level, in discussion  Local community is involved with local LUP	Raw materials important for regional economy > KGHM  WUST, KGHM CUPRUM	Research interest in SLO (AGH)	Walbrzyck Raw Material cluster

**Table 3:** MIREU regions, important features mapped / summarized

## 6. FINAL REFLECTIONS AND OUTLOOK

This Deliverable is the first of MIREU's WP4 (SLO) and is setting the scene, i.e. it is providing first inputs to be further discussed during the project, e.g. for the SWOT analysis in Task 4.3.

Discussions around what the social licence to operate (SLO) is, who grants it, how it can be acquired and/or maintained and the main factors that determine its acquisition/maintenance are a fertile and dynamically evolving research field at the international level and around mineral-related discussions. Multiple contributions exist from scholars coming from (or focusing in) resource rich countries such as Canada, Australia, Peru, Chile or even China. However, the SLO discussion around mining-related issues in Europe appears to be still in its infancy; our mapping of eight MIREU regions found neither SLO definitions nor concepts, with the exception of some areas where Canadian companies are operating (like the Lapland region) in contrast to ample and long-standing research in Canada or Australia.

Our global literature review indicates that the SLO topic is growing in importance within the mining and other sectors fuelled by an increasing awareness on the number of conflicts associated to the extractive industries. Conflicts with local communities turn jurisdictions awaiting investments riskier and thus detract potential investors. Many examples exist around the globe where mineral development projects were either halted or suspended due to lack of SLO by local communities. Thus, SLO continues to draw attention as a term utilized to measure the level of public acceptance for mining projects. While its roots lie in jurisdictions with little to no regulatory oversight, SLO now finds application in highly regulated ones and is becoming a term utilized by the mining industry to measure the level of public acceptance for projects. Moreover, shifting so much attention from the regulatory framework towards a social competence indicates a paradigm shift and a possible trend of informal institutions such as SLO as pre-requisites for gaining formal licences.

As determined by the theoretical developments of Thomson and Boutilier, rather than technical information, essential elements of the relationship between communities, government and companies are the perceptions, systems of values and attitudes of communities, e.g. expectation and aspirations, perceptions of environmental or social risks, on the corporate reputation, trust in the formal institutions and the procedures (e.g. environmental assessments) as well as system of values underpinning a community's decision-making. In this sense it is necessary to understand how constituencies may be influenced by different actors (companies, governments, CSOs) via campaigns and other instruments. In parallel it is important to understand who the constituency that will grant the SLO is as the licence is not granted by a cohesive unit but by a wide range of stakeholders (local and non-local communities).

With respect to uncovering the SLO drivers, even though some models exist and the main drivers of SLO are more or less identified in the literature, still much research is needed to better understand how drivers and variables interrelate with each other and what needs to be better adjusted to generally raise the standards of the industry and regulators to progress towards SLO. During the coming tasks of WP4 further focus will be centered on improving such understanding.

Findings from the European pillar PEST analysis format (political, economic, socio-cultural, technological) to set the scene for the European regions allows us to now paint a broad picture of mining's role – past, present and future – in each of the regions that have been mapped. In so doing, Europe's rich diversity and heritage is perhaps the one obvious constant. Some regions, such as Styria, have selected land use planning as the main mechanism to regulate mining and stave off conflicts. Other regions, such as Upper Silesia, place a strong emphasis on company initiated engagement strategies. Lapland merges strong legislation with also simultaneously emphasizing corporate responsibility and engagement. As the SLO conversation in Europe is really just emerging, all of these different approaches to reconciling mining-related conflicts make sense as it is not clear, at present, what works and what does not. This is, however, one of the main goals of the SLO work in MIREU – to come up with minimum standards that mining companies, who want to undertake mining and metallurgy activities in Europe, observe.

One of the reasons why it is such an interesting time to be involved in better understanding what SLO looks like in Europe is that there is a conscious effort underway to revitalize the mining industry, with the precondition that it be done sustainably, responsibly and with a net benefit to society. While these are obvious and common goals, there is also now a clear willingness taking root in European society to tussle with, and concretely reconcile, difficult issues and competing agendas. It is this continuous engagement with all of the relevant actors that will continue to drive the future SLO work in MIREU.

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## 8. ANNEX

### 8.1 European pillar

#### 8.1.1 Establishing the SLO framework / stakeholders

##### a) ANDALUCIA

ORGANISATION	TYPE	ASSOCIATED PROJECT(S)
COMPANIES OPERATING IN THE REGION		

First Quantum (Canada)	Large metals and mining company	Cobre Las Cruces
TRAFIGURA Mining Group (Switzerland)	Large commodity trader and logistics provider	Matsa (2 <sup>nd</sup> Partner) and Atalaya
Mubadala Investment (Dubai)	Large metals and mining company	Matsa (1 <sup>st</sup> Partner)
Grupo México (Mexico)	Large mining company	Minera Los Frailes
Yanggu Xiangguang Copper Co. Ltd. (China)	Smelting and processing non-ferrous metals	Atalaya
Freeport Mc Moran (USA)	Large mining company	Atlantic Copper
Glencore (USA)	Large mining company	Cambridge Minerals
Acerinox	Large manufacturer is a stainless steel manufacturing conglomerate group based in Spain.	
ORGANISATION		TYPE
PROFESSIONAL ASSOCIATIONS		
AMINER	Industry/business association: involved in metal mining and also lobbies administration	
CONFEDEM	Industry/business association: lobbies administration	
AUTHORITIES		
Direccion General de Industria, Energia y Minas - Junta de Andalucia (DGIEM)	Mining Authorities: regional authority in mining planning, mining permission, mining safety (MIREU partner)	
Regional Environment authority	Environment Authorities: regional authority in environmental planning environmental permission, natural protected areas, Natura 2000	
Urban authorities (local)	Urban authority: local authority responsible for land use permission	
Territorial Authorities (regional)	Regional authority responsible for land use planning.	
NGOs/CIVIL SOCIETY		
ADENA-WWF	Environmental NGO	
ECOLOGISTAS EN ACCIÓN	Environmental NGO	
Civil society	People in defence of cultural heritage and traditions, social development	
Media groups	Press media with different interests	

## b) CASTILLA y LEON

ORGANISATION	TYPE
<b>COMPANIES (FUNDING ENTITIES AFFILIATED WITH GOVERNMENT)</b>	
<b>Perspective: to explore and exploit in the most acceptable way for the administration and local communities</b>	
<b>Institute for Business Competitiveness of Castilla y León</b>	To promote the competitiveness of Castilla y León's and to stimulate and fund the business innovative strategy.
<b>Fundación Santa Bárbara</b>	A public entity of the Community of "Castilla y León", attached to the Ministry of Economy and Employment through the General Directorate of Energy and Mines. Its purpose is to collaborate with mining-affiliated social welfare organisations and to promote cultural activities integral to the mining industry of "Castilla y León".
<b>Fundación Cartif</b>	CARTIF is a horizontal, private and non-profit technology centre. Its mission is to offer innovative solutions to companies to improve their processes, systems and products, improving their competitiveness and creating new business opportunities.
<b>SIEMCALSA</b>	The Sociedad de Investigacion y Explotacion Minera de Castilla y Leon, SA (SIEMCALSA) was created in 1988 by the Junta de Castilla y Leon. The main objectives include: Develop mining and promote research and exploitation of deposits, participation in projects studies or activities related to energy resources, development of works and participation in projects or activities related to water resources.
<b>AUTHORITIES</b>	
<b>Perspective: at the national level, to ensure all activities comply with the legal requirements; at the regional level, the goal is to link economic development with mining activity</b>	
<b>Instituto Geológico y Minero de España</b>	The Geological and Mining Institute of Spain is a research institute located in Madrid, Spain. It is run under the auspices of the Ministry of Economy and Competitiveness.
<b>Dirección General de Energía y Minas-Junta de Castilla y León</b>	Administration regional level (MIREU partner)
<b>CIVIL SOCIETY</b>	
<b>Perspective: local communities want the positive effects (e.g. jobs) without risks or damages; ecologists and conservationists prefer either no change or minimal change and to keep the traditional and rural livelihood of the towns, as well as the environment, as untouched as possible.</b>	

c) **CORNWALL – some example stakeholders**

ORGANISATION	TYPE
<b>PROFESSIONAL ORGANISATIONS</b>	
<b>Cornwall Mining Alliance</b>	Professional Association / Networking Cluster
<b>CONSULTANCIES</b>	
<b>Wardell Armstrong International</b>	Professional, international mining, environmental and engineering consultancy
<b>Green Horizons</b>	Independent company offering site-level and strategic analysis and guidance on understanding and monitoring sustainability issues and the prevention, minimisation and management of environmental and social impacts associated with industrial operations.
<b>NON-PROFITS</b>	
<b>UNESCO Cornish Mining World Heritage</b>	Non-profit organization dedicated to promoting Cornwall's mining heritage.
<b>EDUCATION AND RESEARCH</b>	
<b>Camborne School of Mines (University of Exeter)</b>	A global top 100 university and integrated mining school attracting international students from 130 countries.
<b>COMPANIES</b>	
<b>Imerys Minerals Ltd</b>	Active china clay producer and developer of mineral-based products
<b>Cornish Lithium Ltd.</b>	Exploration company
<b>Strongbow Exploration Inc.</b>	Canadian mineral exploration company whose flagship project is South Crofty Tin Mine.
<b>The Crown Estate</b>	An independent commercial business, created by an Act of Parliament, with a diverse portfolio of UK buildings, shoreline, seabed, forestry, agriculture and common land.
<b>Cornwall Resources Ltd</b>	Focused on the Redmoor Tin/Tungsten mining project in the Kelly Bray & Callington area. Owned by Strategic Minerals Plc and New Age Exploration Ltd.
<b>Delabole Slate Company Ltd</b>	The trade name for products of the centuries-old Delabole Slate Quarry in Cornwall. The quarry remains active.
<b>EGS Energy Ltd.</b>	Development and consultancy company specialising in engineered geothermal system technology. Proposed site at Eden Project, Cornwall.
<b>Marine Minerals</b>	Exploration company. Evaluating feasibility of extracting and processing mine tailings mineral sands in shallow water off the Cornish coast of the UK.
<b>Minerals Engineering International</b>	Organiser of global minerals engineering conferences; a networking and promotional organization for the minerals industry, based in Cornwall.
<b>Cornish Sea Salt Co.</b>	Company harvesting, processing and selling Cornish sea salt from open

	waters (the protected waters of the Atlantic at The Lizard peninsula, a designated Area of Outstanding Natural Beauty).
<b>Lantoom Quarry</b>	Lantoom Quarry supplies Cornish slate and granite stone from an active quarry.
<b>AUTHORITIES</b>	
<b>Member of Parliament</b>	Conservative Party Member for St Austell and Newquay
<b>Cornwall Council Local Enterprise Partnership</b>	Regional government that specializes in promoting activity to support business growth and create jobs (MIREU partner)
<b>Cornwall Council</b>	Regional municipality of Cornwall. Regulatory role includes mineral policy, planning and permitting.
<b>Devon County Council Mineral Planning (regulators)</b>	Regional municipality of Devon. Regulatory role includes mineral policy, planning and permitting. Transboundary considerations with Cornwall Council.
<b>Forestry Commission England</b>	Government department responsible for protecting, expanding and promoting the sustainable management of woodlands and increasing their value to society and the environment.
<b>Marine Management Organisation</b>	MMO is an executive non-departmental public body, sponsored by the Department for Environment, Food & Rural Affairs. License, regulate and plan marine activities in the seas around England so that they are carried out in a sustainable way.
<b>Natural England</b>	An executive non-departmental public body, sponsored by the Department for Environment, Food & Rural Affairs. Government's adviser for the natural environment in England, helping to protect England's nature and landscapes for people to enjoy and for the services they provide. Consultee on mineral development applications.
<b>CIVIL SOCIETY</b>	
<b>The Eden Project</b>	An educational charity connecting people and the living world. Visitor destination in Cornwall, within a worked-out china clay pit. Education themes include sustainable raw materials sourcing and mining lifecycle, notably closure/post-closure land use.
<b>Cornwall Area of Outstanding Natural Beauty</b>	An organisation governing the Cornwall Area of Outstanding Natural Beauty - Cornwall's Protected Landscape with the same level of protection as a National Park. Consultee on mineral development applications.
<b>Future Terrains</b>	A social enterprise tackling the challenges of degraded lands by working to improve environmental and community practices and helping to restore impaired places.

#### d) LAPLAND AND NORTHERN KARELIA

ORGANISATION	TYPE
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AUTHORITIES	
<b>Finnish Safety and Chemicals Agency (TUKES)</b>	TUKES operates under several Ministries, the Ministry of Economic Affairs and Employment being in charge of the ministerial governance and supervision. The Industrial Department attends to the surveillance of the safety of industrial plants and installations, mining, contracting and installation business, and inspection services. The surveillance objects include mines and ore prospecting and gold washing sites.
<b>Lapland Centre for Economic Development, Transport and the Environment (ELY centres)</b>	Regional Authority Oversees environmental review process for mining activities
<b>Regional Council of Lapland</b>	The Regional Council of Lapland is a joint municipal board formed by its 21 member municipalities. Performing the regional land use and development planning tasks of joint municipal boards
<b>Samediggi (The Sámi Parliament of Finland)</b>	The Sámi Parliament is the supreme political body of the Sámi in Finland representing the Sámi in national and international connections. It is an independent legal entity of public law which, due to its self-governmental nature, is not a state authority or part of the public administration.
<b>Sodankylä</b>	Municipality and site of the proposed Sakatti project
<b>Kittilä</b>	Municipality and site of Agnico Eagle's Kittilä mine
<b>Ylitornio</b>	A village in the Finnish municipality of Ylitornio. It is the administrative centre, the largest town in the municipality, and site of the Mawson Resources project.
<b>Kolari</b>	Within the province of Lapland, it is a small municipality of Finland at the Swedish border, which follows the Torne River. Site of the proposed Hannukainen mine (and other mines too).
<b>Ranua</b>	Municipality and site of Suhanko Arctic Platinum project.
PROFESSIONAL ASSOCIATIONS	
<b>KATEPAL Network</b>	Established 4 years ago to exchange experiences and knowledge among professionals in mining in Lapland. Group of mining industry services, Arctic Industry and Circular Economy Cluster.
<b>Finnish Network for Sustainable Mining</b>	National level network of mining stakeholders intended to improve the performance of Finland's mining industry.
<b>Metallinjalostajat ry (Association of Finnish Steel and Metal Producers)</b>	A branch of the Technology Industries of Finland (Teknologiateollisuus) consisting of Finnish metal processing companies.
UNIVERSITIES/INSTITUTES	
<b>Geological Survey of Finland</b>	Research, Development and Innovation (RDI) Arctic Smart Mining Cluster project

<b>University of Lapland</b>	RDI Arctic Smart Mining Cluster project
<b>Lapland University of Applied Sciences</b>	RDI Arctic Smart Mining Cluster project
<b>University of Eastern Finland</b>	RDI University with mining capacity, i.e. Research Center for Socially and Environmentally Responsible Mining (SERM)
<b>COMPANIES</b>	
<b>AA Sakatti Mining Oy</b>	A subsidiary of Anglo American Plc. UK, developing the Sakatti project (Cu-Ni-PGE) in Sodankylä. Undertakes exploration in the Sodankylä and Kittilä municipalities in Lapland. The majority of the exploration permit areas are located north of the Sodankylä municipality centre, within three reindeer cooperatives (Oraniemi, Sattasniemi and Syväjärvi).
<b>Agnico Eagle Finland Oy</b>	A subsidiary of Canadian gold-mining company Agnico Eagle Mines Limited. It owns the Kittilä mine and engages actively in mineral exploration in Finland and Sweden. The Kittilä mine is the largest operating gold mine in Europe.
<b>Boliden Kevitsa Mining Oy</b>	A subsidiary of Boliden Mineral AB, Swedish mining and smelting company operating the Kevitsa open-pit mine (nickel, copper, gold, platinum and palladium).
<b>Boliden Kylylahti Oy</b>	A subsidiary of Boliden Mineral AB operating the Kylylahti mine (copper, gold and zinc), located in the historic mining district of Outokumpu in Northern Karelia, Finland. The operation includes the Kylylahti underground mine in Polvijärvi and the Luikonlahti processing plant at Kaavi.
<b>Endomines Oy</b>	Operates Pampalo underground gold mine, in Ilomantsi, Northern Karelia and does the exploration along the Karelian Gold Line in Eastern Finland.
<b>Hannukainen Mining Oy</b>	A subsidiary of Tapojärvi Oy developing the Hannukainen Mine project (iron-ore) in Kolari municipality.
<b>Outokumpu Chrome Oy Kemi Mine</b>	The Kemi mine is the only chromium mine in the European Union. It is located in Elijärvi, in the municipality of Keminmaa. The Kemi Mine is the largest underground mine in Finland, with an annual production capacity of 2.7 million tonnes of ore. It is also part of the integrated ferrochrome and stainless steel manufacturing chain owned by Outokumpu Oy in the Kemi-Tornio region.
<b>Outokumpu Stainless Oy Tornio Works</b>	Tornio stainless steel operations in Tornio, Lapland. The only fully integrated stainless steel facility in the world.
<b>Palsatech</b>	Mining services company  Palsatech Oy (founded 2013) has developed a new and unique service concept and to explore in a cost effective way. Services have been designed to serve the needs of the mining and

	construction industry.
<b>Tapojärvi Oy</b>	Mining services company Tapojärvi Oy is a company specializing in mining services and industrial processes and materials handling.
<b>Kemin Digipolis Oy</b>	Business Development Cluster Manager for Arctic Industry and Circular Economy cluster
<b>Josek Oy</b>	Business Development Arctic Smart Mining Cluster project
<b>Mawson Oy</b>	A subsidiary of Mawson Resources Ltd headquartered in Vancouver, Canada. An exploration company with a focus on Rajapalot and Rompas gold discoveries in Ylitornio, Finland.
<b>Suhanko Arctic Platinum Oy</b>	A Finnish subsidiary of private equity fund CD Capital Natural Resources Fund III (CD Capital), headquartered in London. Suhanko in municipality of Ranua, consists of three large project areas in northern Finland, named Suhanko, Narkaus and Penikat, with (PGEAu) deposits. The project is at a technical feasibility stage.
<b>CIVIL SOCIETY</b>	
<b>Paliskunnat</b>	Reindeer Herding Association Represents all of the reindeer herding cooperatives in Finland
<b>Oraniemi Reindeer Herding Cooperative</b>	Reindeer herding community located in municipality of Sodankylä.
<b>Sattasniemi Reindeer Herding Cooperative</b>	Reindeer herding community located in municipality of Sodankylä.
<b>Syväjärvi Reindeer Herding Cooperative</b>	Reindeer herding community located in municipality of Sodankylä.
<b>Finnish Nature Conservation Association</b>	The purpose of the Finnish Association for Nature Conservation is to protect the environment, promote nature conservation, preserve cultural heritage, and promote active citizenship and environmental awareness.
<b>WWF Finland</b>	WWF works in Finland and its surrounding areas to protect endangered animals and habitats.

#### e) SAXONY, GERMANY

ORGANISATION	TYPE
<b>AUTHORITIES</b>	
<b>State Mining Authority of Saxony</b>	Governs ore and spar mining in the Free State of Saxony.

<b>Saxon State Office for Environment, Agriculture and Geology</b>	Performs the tasks of the State Geological Survey
<b>Sächsisches Landesamt für Umwelt, Landwirtschaft und Geologie</b>	State Office for Environment, Agriculture and Geology
<b>Ministerium für Wirtschaft, Wissenschaft und Digitalisierung des Landes Sachsen-Anhalt</b>	<p>The Ministry of Economic Affairs, Science and Digitization creates optimal conditions for research excellence and entrepreneurship in Saxony-Anhalt. It shapes the economic and research promotion as well as the higher education landscape.</p> <p>The focus is on close cooperation between business and science as well as on the topics of innovation, investment and internationalization.</p>
<b>PROFESSIONAL ASSOCIATIONS/NETWORKS</b>	
<b>Geokompetenzzentrum</b>	Mining and metallurgy cluster and association – regional network. One of Germany's largest interdisciplinary networks. Pools business, scientific and management skills and supports the valorisation of domestic resources by projects and intense panel work at Brussels.
<b>FIRE e.V.:</b>	Network of recycling and disposal companies
<b>LIBESA</b>	Saxon battery network with producers and the raw material suppliers
<b>Zukunft Westerzgebirge e.V.</b>	The Association Future Westerzgebirge eV is a public-private partnership and embodies the Local Action Group (LAG) of the LEADER region Westerzgebirge. The LAG coordinates the development of rural areas in the LEADER region Westerzgebirge in the Free State of Saxony.
<b>COMPANIES</b>	
<b>Fugro Germany Land GmbH</b>	Fugro provides a wide range of resource and mining consultancy services throughout the mine life cycle. Services range from desk study, reconnaissance and exploration, through feasibility and construction, to operation, and eventual closure.
<b>BB Consult</b>	Business management consultant(?)
<b>SAXONIA Standortentwicklungs- &amp; -verwaltungsgesellschaft mbH</b>	SAXONIA Site Development and Management Company. Business partner in central Saxony and an integral part of the Freiberg economic structure. As a traditional and high-performance location developer, the company shapes the region through targeted revitalization and environmental management as well as through active economic development.
<b>SAXORE Bergbau GmbH</b>	Saxore Bergbau GmbH (SBG) is a German registered company set up to hold ASM's projects in that country. SBG is focussed

	on tin, indium and zinc mineralisation within the Free State of Saxony. The main focus at the moment is on the Tellerhäuser Project within the Breitenbrunn licence - a tin-indium-zinc-magnetite deposit.
<b>RDB Ring Deutscher Bergingenieure e.V.</b>	The RDB eV is the ring of engineers, technicians and executives in all mining branches (overground and underground mining) and also includes authorities, planning offices and institutes, and technical schools, colleges and universities.
<b>Schachtbau Nordhausen GmbH</b>	A modern engineering and technology company specialized in mining works, plant engineering, mechanical engineering, structural steel engineering and construction.

f) **STEREA ELLADA**

ORGANISATION	TYPE
<b>AUTHORITIES</b>	
<b>Federal Government</b>	
<b>Regional Government</b>	
<b>CIVIL SOCIETY</b>	
<b>WWF Greece</b>	Environmental NGO

g) **STYRIA, AUSTRIA**

ORGANISATION	TYPE
<b>AUTHORITIES</b>	
<b>Federal Ministry of Science, Research and Economy, BMWF</b>	The Ministry of Economy is the ministry in charge of promoting commerce and industry, overseeing public works, and maintaining the public infrastructure.
<b>Montanbehörde Süd</b>	Federal Ministry for Sustainability and Tourism, Energy and Mining Department
<b>Land use authorities of the provinces</b>	
<b>UNIVERSITIES/INSTITUTES</b>	
<b>University of Graz</b>	Institute of Geography and Regional Science



<b>Tourismusverband Erlebnisregion Erzberg</b>	Main tourism association promoting activities in the region of Erzberg.
<b>Geological Federal Institute</b>	The Geological Survey of Austria (GBA) is the largest geoscientific research centre in Austria. It is often called the geological conscience of the country. The legal mandate is clearly defined. The task of GBA is to study and document the geology of the country.
<b>Austrian Institute for Spatial Planning, OIR</b>	When space related decisions require profound knowledge, the expertise of the Austrian Institute for Spatial Planning (OIR) is sought after. Since its foundation in 1957, OIR developed from a prestigious academic institution into a modern and dynamic consulting firm in the heart of Vienna.
<b>COMPANIES</b>	
<b>VA Erzberg GmbH</b>	Mining company that operates the Erzberg mine. Large employer and partner for institutions around the Styrian Erzberg.
<b>BUSINESS ASSOCIATIONS</b>	
<b>Chamber of Commerce (Division Raw Materials)</b>	
<b>Representatives of industry (construction minerals)</b>	
<b>CIVIL SOCIETY</b>	
<b>Global 2000</b>	GLOBAL 2000 is an independent Austrian environmental organization. GLOBAL 2000 is a member of Friends of the Earth, the largest international network of environmental organizations.
<b>WWF</b>	Conservation work of WWF Austria is especially dedicated to the Alpine and Danube Region.
<b>Environmental Advocacies of the provinces</b>	

#### h) UPPER and LOWER SILESIAN VOIVODSHIP, POLAND

ORGANISATION	TYPE
<b>AUTHORITIES</b>	
<b>Institute for Territorial Development</b>	Institute for Territorial Development is a self-government organisational unit of the Office of the Lower Silesian Marshal.

	IRT carries out tasks of the voivodeship (province) related to policy of development and spatial planning.
<b>UNIVERSITIES/INSTITUTES</b>	
<b>AGH</b>	A partner in MIREU, AGH University of Science and Technology is a technical university in Poland, located in Kraków. The university was established in 1919, and was formerly known as the University of Mining and Metallurgy.
<b>COMPANIES</b>	
<b>KGHM Cuprum</b>	Research and Development Centre. Offers research and design works in the field of mining, ventilation, electrification and mechanization and automation of mines, geology and hydrogeology, processing of environmental ores and modern technologies of obtaining energy, as well as geodetic and cartographic services.
<b>Rathdowney Resources</b>	Canadian based exploration company whose Olza Project is a case study for the SLO work package.

### 8.1.2 Establishing the SLO framework emerging case studies

#### a) ANDALUSIA

##### *Aznalcollar Mine versus Minas de Aguas Teñidas*

The Aznalcollar mine is one negative example of the consequences of poor mine closure and, 20 years later, exemplifies a major crisis in which the company, authorities and community are still trying to rebuild trust. Boliden, the owner and operator of Aznalcollar mine, assumed no environmental or social responsibility when it left due to an unplanned closure. In 1998, serious environmental damage occurred in the heart of one of the most important natural spaces in the world, Doñana Nature Area (bioreserve and UNESCO World Heritage designation). Today this same issue, in the form of an economic complaint to Boliden, continues under court decision. People do not forget accidents of this magnitude, and as a result, every new mining project that seeks permits is first viewed through this lens and the regional government has to constantly manage these perceptions.

This fact was the origin of a new European regulation (DIRECTIVE 2006/21/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC), and the implementation of that Directive in national regulation has helped to increase the people's trust in mining.

The standards in Andalusia required for new mine applications are now higher than before the Aznalcollar tailing dam failure, and new technologies are being applied to projects in the Iberian Pyrite Belt.

Mina de Aguas Teñidas is a new mine that started to operate in 2009 by a Trafigura Company named MATSA. They exploit copper, zinc and lead sulfur in an underground mine and process them in a concentrate plant on the mine site. Today, MATSA (owned by Trafigura and Mubadala) has three mines open near the first one, all of which supply mineral to the processing plant, and there are plans to open two more mines. They currently process 4,6 M tn of minerals and produce more than 500.000 tn of concentrates. They have an intensive exploration program all around the Iberian Pyrite Belt with an investment of more than 40 M€. Direct and indirect

employment hovers around 4.000 people.

MATSA mining complex is settled in a historic mining district where the activity was decreasing during the second half of the 20<sup>th</sup> century and people left the villages for the cities. The scarce population in the region remembers the heyday of mining and has been surviving with social help and employment in the forestry sector. Now, the new mine works are again filling the villages with people and revitalizing the region economically and socially. The social, economic and employment aspects, in conjunction with new sustainable technologies (underground mining, no tailing dams but camera paste filling, pillars recovering, near zero discharge, water treatment plants, new and innovative works, etc.), have contributed to a solid and relatively quick social acceptance.

Recently, the Regional Administration has been processing a new proposal to reopen the Aznalcollar mine, but there are no results to report to date.

## **b) CASTILLA Y LEON**

### ***Feldspar project in Avila***

There are four mining projects that comprise the Feldspar project (three are exploration and one is exploitation) and all are subjects of controversy. The projects are led by two local micro-companies. If the projects achieve all of the permits, there will be three quarries, an exploitation of sandy material in a hilly and relatively sparsely populated area, and possibly a treatment plant that would involve milling and sieving.

Social opposition is mainly driven by several citizen platforms that have presented more than 20,000 signatures against the prospective works. Other activities of these platforms are the organization of public demonstrations, press releases, request for support through the internet (more than 100,000 signatures), and request for support from mayors. Arguments against the projects are varied:

- Impacts on people's health (dust emissions provoking lung cancer, silicosis, etc.)
- Impacts on Natura 2000 (eagle, wolf, different types of butterfly)
- Impacts on the underground waters
- Impacts on traditional livelihood (livestock, rural tourism)

Some of the information provided by these platforms are either incorrect (presence of uranium or asbestos, emissions of radioactive radon or fluorhydric acid) or exaggerated (number of feldspar projects, affected surface). There are suspicions that larger businesses (multinational companies, a wider mining plan for the feldspar) are behind the conflicts. All of this controversy has gotten a lot of run time on the media, both at the regional and national levels (newspapers, radios or TV channels).

### ***Magnesite mine of Borobia***

Case study to be added at a future date.

### ***Uranium project of Retortillo***

Case study to be added at a future date.

**c) CORNWALL*****South Crofty Mine***

Strongbow Inc. aims to reopen the South Crofty Mine, the last tin mine in Cornwall to close in 1998. All permits are now in place and the plan is that tin will be mined by 2021. Approximately 275 direct jobs and four times that many indirect jobs are anticipated to be generated.

***New Age Exploration***

An Australian mining company called New Age Exploration (NAE) acquired an exploration license and the right to develop and operate a new mine at Redmoor in 2012. Cornwall Resources Ltd. (CRL) was then set up as a joint venture between NAE and Strategic Minerals for the Redmoor Tin-Tungsten mine.

***Cornish Lithium***

Cornish Lithium Ltd. aims to extract lithium from deep saline waters in a large area centered on the traditional mining areas of Camborne, Redruth and St Day. Lithium's presence in underground hot salty springs in Cornwall has been long known but until now the water was regarded as a nuisance rather than a business opportunity.

***Imerys Minerals***

A multinational industrial minerals producer with china clay mines and also research laboratories in Cornwall. Imerys Minerals won a national award for the regeneration and restoration of large areas of former china clay land in mid-Cornwall, a project entitled *Tomorrow's Heathland Heritage Project – Putting the Wild Heart Back into Cornwall*.

***Dean Super Quarry***

A proposed expansion of a quarry on the Lizard peninsula, which is designated an 'area of outstanding natural beauty', will provide rock for a renewable energy project in south Wales. Nearly a third of Cornwall is designated as an area of outstanding natural beauty, granting it the same status and protection as a national park. Shipping of material by sea is also controversial because of the proximity to the Manacles Marine Conservation Zone.

***Drakelands Mine***

Wolf Minerals Limited opened an open-pit tungsten mine at Hemerdon (in Plymouth) called Drakelands Mine in 2015. The company is an Australian-owned specialty metals producer.

**d) LAPLAND, FINLAND*****Agnico Eagle's Kittilä Gold Mine***

Agnico Eagle is a Canadian company based in Toronto and their Kittilä (or Suurikuusikko) Gold Mine is the largest gold mine in Europe. It is situated in northern Finland (Lapland), approximately 150 km north of the Arctic Circle, and has a mine life estimated through 2035.

Kittilä achieved commercial production on May 1, 2009, becoming Agnico Eagle's first mine to open outside of Canada. Ore has been mined from underground since 2010, and since open-pit mining was completed in 2012, it has been an underground-only operation. The Company now has an approved 160-million-euro expansion project that will include the construction of a 1,044-metre deep shaft, a processing plant expansion that will increase throughput by 25% to 2.0 million tonnes per year, as well as other infrastructure and service upgrades.

Most stakeholders that have been involved in the mine's development consider Kittilä mine to be a very good example of building trust and an enduring company-community relationship. Even so, there are still some unhappy voices. The villagers of Kiistala, who live in the immediate vicinity of the Kittilä gold mine, feel they experience all of the negative environmental impacts (i.e. heavy traffic caused by commuting workers, dust, noise and potential water problems at the mine) but do not get the benefits. They expected to have new families moving into the area, which they assumed would increase property values and catalyse the development and maintenance of public and private services. This did not happen as most of the new residents moved closer to the larger municipality of Kittilä. There are also questions that arose as to whether mining will provide the locals a better future in the long term, or if they are better served by industries such as tourism, which has been continuously developing in the area, and also reindeer herding, a traditional livelihood that has survived until the present day.

When it comes to tensions between mining and other industries, the number one conflict is with tourism. To address this, Agnico Eagle has a dedicated section on their website that describes various programs focused on expanding the cooperation between the tourism industry in Levi and the Kittilä mine. Far from being contentious, the general feeling among the communities is that the synergies between the two sectors have offered a broad range of jobs in Kittilä making it easier for families to settle in the area for the long term.

#### e) **SAXONY, GERMANY**

##### *Saxore Bergbau Case Study*

During the first SLO Workshop in Rovaniemi, Dr. Marco Roscher (managing director of Saxore Bergbau), gave a presentation on the challenges facing junior mining companies and his perspective on SLO with respect to Saxore Bergbau's proposed project. Saxon policy papers support mining and overall the level of acceptance for mining in Saxony is positive. Interestingly, this holds true even though the unemployment rate is very low, which often portends less local support since there are employment alternatives.

Within the sphere of the project are numerous actors with varied agendas:

- Wismut GmbH, the federal government, is the owner of the mine
- Saxore Bergbau, the operator of the mine
- Regional authorities issuing permits and in charge of land use planning
- A miner's association is operating the tourist mine which is the site's current use
- Local residents, and while they are pro-mining, there are concerns about increasing traffic
- Neighbouring (mining) license owners provide competition



While mining as a whole is supported, nevertheless conflicts remain, the main ones being:

CONFLICTS	MOVING TOWARD RESOLUTION...
<p><b>Not in my backyard mentality and fear of the unknown</b></p>	<p>Early contact and open discussions with the community matter as does providing information in a transparent way.</p> <p>One of the arguments that should be made to support the European mining industry is that it can be done in a much more socially and environmentally responsible way as Europe has very high standards compared to many countries.</p>
<p><b>Tourism and heritage vs. new mining</b></p>	
<p>In Saxony, and with respect to the Saxore Bergbau project in particular, the issues of tourism and heritage versus new mining can prove difficult to resolve. While many of the MIREU regions that have a tradition of mining find it makes new mining projects easier to permit, a mining tradition can also hamper new mining activities. While developing cooperation between a mine that has been transformed from an operating mine to a tourist attraction, in concept, sounds like a good idea, <i>in reality, volunteers dedicate thousands of their spare time hours working in the tourist mine and have a personal, emotional investment in maintaining it.</i></p>	
<p><b>Job creation is low compared to the automotive industry</b></p>	<p>An awareness campaign that mining is no longer part of the dirty dinosaur industry as it is has evolved significantly over the last 50 years.</p>
<p>Job creation used to be one of the key benefits of a mine, and perhaps the most persuasive argument in wooing an uncertain local community. But developing a mine takes years and there may only be, for example, 100 jobs created within a span of 5 years. For politicians, the number of potential votes is very small, which is in part why the approval of a controversial mining project tends to be pushed into numerous electoral cycles. In addition, mining is still not seen as a high skilled well-paying industry.</p>	<p>Although mining will always be linked to commodity prices, it is a business planned over decades and therefore needs long term strategies that somehow also fit with our fast-changing world, which is financially calculated in quarters.</p>

**Belief that all mining companies, whether juniors or majors, must have a lot of money in order to develop a project, and as a result, large demands are placed on them**

The need to educate the community, from residents to politicians, about the junior mining business.

Even though the vast majority of mining companies are SMEs or micro-companies, there is relatively little understanding of the junior mining company business. These businesses, including Saxore Bergbau, are small and have limited budget. They also have more risks than the community understands, and legal disputes of any kind are problematic in terms of the company having the skills, budget and time to respond and simultaneously stay afloat.

**Non-mining people are either unaware of or do not care about the downstream jobs and security of raw material supply**

**Lobbying for the environment is a big industry**

The question has arisen as to whether the mining business should do more emotional lobby work?

**Facts vs. emotions**

It appears that even the best fact-based presentation is useless against emotion and ideology.

**Every administrative decision can be legally challenged**

**Politicians have provided a written commitment to new mining but no direct actions have as yet been taken.**

Both the economic and political (given elections occur once every 4 years) ramifications for an industry with a long time-horizon should be considered.

#### f) STEREA ELLADA

A case study will be provided in the future.

#### g) STYRIA, AUSTRIA

##### *Erzberg Mine*

The Styrian iron ore mine (VA Erzberg) is located in Upper Styria near Leoben and is the largest open pit mine in Central Europe. It has been successfully extracted for more than 1300 years and still employed 230 people in 2016<sup>33</sup> and continues to increase. VA ERZBERG GmbH is

<sup>33</sup> [http://www.kleinezeitung.at/steiermark/5116865/MillionenInvestitionen\\_Der-Erzberg-sprengt-wieder-Rekorde](http://www.kleinezeitung.at/steiermark/5116865/MillionenInvestitionen_Der-Erzberg-sprengt-wieder-Rekorde)

Austria's only iron ore producer<sup>34</sup>. The extraction of the rock occurs by drilling and blasting and the blasted material is disposed of via large wheel loaders, a hydraulic excavator and heavy dump trucks. The location of the mine within the city of Eisenerz requires special techniques to assure low environmental impacts. In November 2016, an EU project – SLIM/ <http://www.slim-project.eu/> - aimed at minimizing the impact of explosions at the Erzberg on settlements in Eisenerz was launched.



In addition to the extraction of iron ore, various other uses are currently being implemented on the Erzberg site. For example, a haul truck trip leads visitors through the active open-pit mining area, where drilling, blasting, digging, and hauling is done every day<sup>35</sup>. Melding the need to preserve the characteristics of the Erzberg, while simultaneously determining its best possible use in economic, cultural and touristic terms, are in the interest of the region and the country. The local community is interested in developing a tourism approach entitled "Around the Erzberg" and already contributing to this effort is an existing, and also very famous, internationally known off-road spectacle - the Erzberg-rodeo.

In SLO terms, there does not seem to be any apparent antagonism toward the mine. However, one of the MIREU partners did mention there were a couple of voices in opposition and interviews with them would hopefully be conducted at a later time.

## **h) UPPER SILESIA, POLAND**

### ***Projekt Olza, Rathdowney Polska***

**Prepared by:** Zuzanna Łacny, Anna Ostreġa, AGH UST

The case study was prepared in response to the following questions:

- Who was the opposing group that prepared the report?
- What were their major concerns?

<sup>34</sup> <http://www.slim-project.eu/>

<sup>35</sup> <http://www.abenteuer-erzberg.at/cms/?lang=en>.

- Did they have support among the local community?
- How did Rathdowney handle the situation?

## 1. Basic information

**Project name:** Projekt Olza

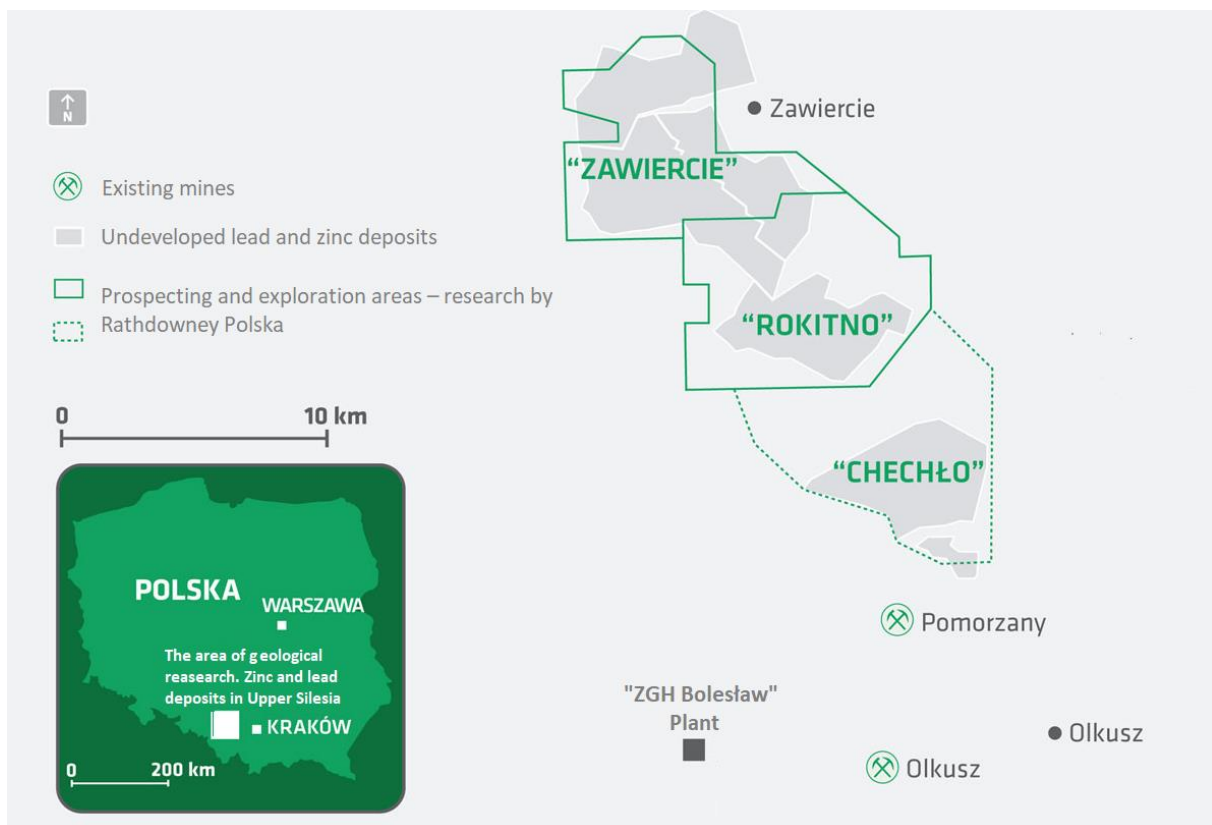
**Company:** Rathdowney Polska Sp. z o.o.

Rathdowney Polska Sp. z o.o. is a division of the Canadian company Rathdowney Resources Limited, which belongs to the Hunter Dickinson Inc. Group. (HDI), an international concern in the field of exploration and exploitation of mineral resources. The main goal of the company is to look for new deposits of basic metals (zinc and lead) in southern Poland.

**Location of lead and zinc deposit:** The area of Zawiercie, Łazy, Ogródzieniec and Poręba communes (between two cities: Olkusz in Lesser Poland (Małopolska) Voivodeship and Zawiercie in Silesian Voivodeship)

**Start of the project:** 2010, **current phase:** developing an EIA report

**Opposing group:** Residents, employees of the steel and scrap industries (CMC Poland Ltd. - Commercial Metals Company, B-D S.A, BSK RETURN S.A Production Plant)



Project location (source: <http://www.projektolza.com>)



## 2. Conflict background

The aim of the research conducted by Rathdowney Polska is to identify and confirm the economic value of the lead and zinc deposits and their borders. The effect of the company's activities will be detailed documentation constituting the basis for planning the construction of a potential zinc and lead mine.

In 2010 and 2012, Rathdowney Polska obtained a total of three licenses for prospecting and exploration of mineral deposits:

- License dated 12/05/2010, no. 26/2010/p – deposits: Zawiercie I, Zawiercie II, Rodaki - Rokitno Szlacheckie
- License dated 2/07/2010, no. 34/2010 / p – deposits: Zawiercie I, Marciszów
- License dated 20/09/2012, no. 27/2012 / p – deposit: Chechło

After receiving the licenses, the company started geophysical research. In the years 2011-2015, they made a total of 265 geological drilling wells and developed geological documentation, approved in 2014 by the Chief Country Geologist. From the beginning, Rathdowney Polska has presented information on the advancement and scope of the project to the residents.

In 2010-2013, when geological work was carried out, Rathdowney focused on meetings with landowners of drilling areas (over 1000 meetings). The landowners received a payment for the ground lease. At this stage, the opposition was not observed. In 2013, Rathdowney began organizing meetings with residents of communes covered by the license and launched information and consulting points.

Increasing the frequency of meetings with the local community from 2013 caused the spread of information about the planned mine and more opponents appeared. At the meeting with residents of Rokitno Szlacheckie, on April 11, 2013, the residents complained that they were not informed about the activities of Rathdowney and plans of building a mine. They accuse the company and the mayor for the lack of information. However, this was not the first information meeting, such meeting was also held in Rokitno Szlacheckie in 2011. It cannot be said whether the complaint about the lack of information about the project resulted from the small interest of the residents in the first meeting or not enough promotion provided by the company.

### Who the opposing group was that prepared the report?

In 2015, the Association "Not for zinc and lead mine" was established in Zawiercie. Members consist of:

- Councillors of the city of Zawiercie
- employees of the CMC Poland Sp. z o.o. - Commercial Metals Company (recycling, production and processing of steel)
- employees of B-D S.A (involved in the production of metal products for hard coal and copper mining, manufacture of metal products for construction)
- employees of BSK RETURN S.A (scrap processing, sale of steel products, production of construction reinforcements and steel structures, metal foundry)

CMC Steel Plant has commissioned Multiconsult Polska Ltd. to prepare the Report titled "Analysis of the impact of the potential construction of zinc and lead mine in the Zawiercie". The report informs residents incorrectly about the effects of the investment, because it focused on manipulated information which has presented only the negative influence of the mining activity on each aspect – environmental and socio-economic. The analysis of this report done



by AGH UST has shown that most of the presented threats cannot occur. Citizens who are not specialists in lead and zinc extraction and processing, however, could consider the Multiconsult report to be reliable. The report prepared by AGH is on the OLZA Project website as well.

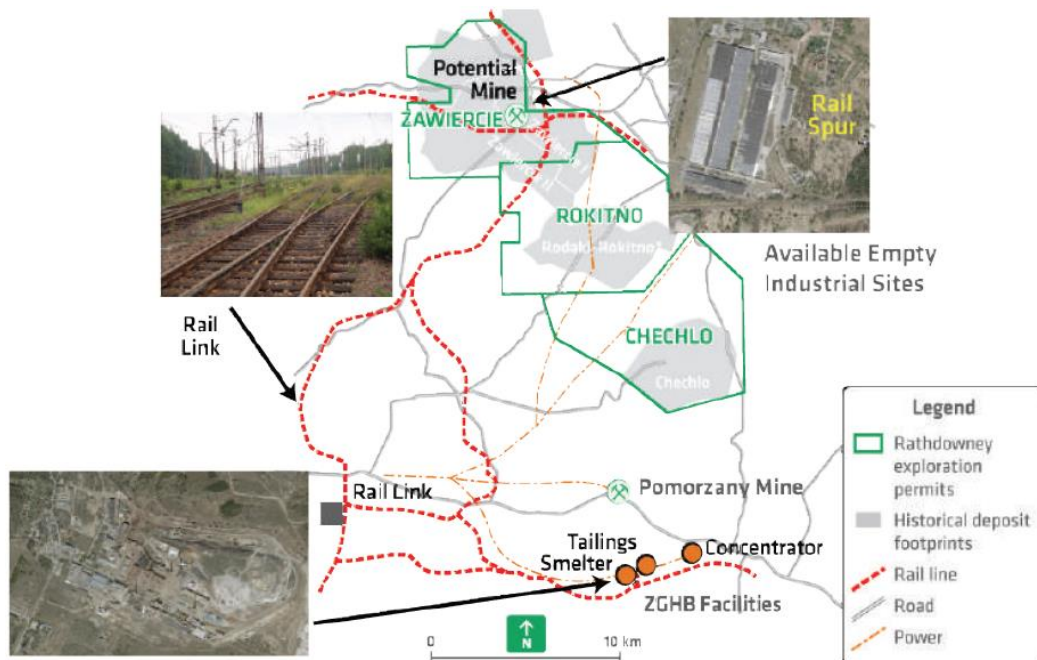
### 3. What their major concerns were?

The main arguments of the Association against the mine are:

- Negative impact on water relations - cone of depression, water quality and increase in its price, plus lack of water for other investments. This aspect is particularly in the interest of the steel industry as the employees are afraid of water shortages.
- Failure to keep the promises that Rathdowney made if another company gets the license for mining;
- Threat to the tourism and agricultural industries;
- Conflict of mine infrastructure with settlements (not a welcome neighbour);
- Mining damages;
- Lack of employment for the local community. Workplaces for qualified miners from liquidated mines nearby;
- Use of extracted zinc and lead outside Poland;
- Fear of the consequences of mine closure (e.g. abandoned mine, lack of reclamation).

Residents also point to Rathdowney and assert they are being poorly informed. The following information (as of July 2018):

- Location of the potential mine



Source: rathdowneyresources.com

- A note about qualified mining personnel within an hour of the mine, despite promises of employing the local community;
- The statement is incompatible with the feelings of the local community: *“Project Olza has strong community and government support for its full development (...)”*

The statement does not appear on the Polish website for the project so far, but it appears on the official English-language website of Rathdowney Resources. Keeping in mind the above, residents who have an insight into the company's materials in English feel uninformed and even angry.

(Note: More information will soon be available regarding this question, as soon a questionnaire will be prepared by AGH UST, which will provide pertinent data. In addition to the above, it is worthwhile noting there are three municipalities on which the infrastructure of the mine, together with the tailing pond, will be built. It appears some local governments support construction of the proposed mine, but other local governments are planning to organize a referendum among the residents and base their decisions on the outcome of those referendums.)

#### 4. How did Rathdowney handle the situation?

Since the beginning, the company was financially supporting local communities. It has donated funds for youth scholarships and social welfare centres numerous times. Financing also included events for school children, sports clubs, local and cultural events. Rathdowney informs the local community about the project through public meetings and by updating information on their website. The table shows the types of activities that Rathdowney conducted as part of a dialogue with the local community.

Activity	Time period	Results, comments
Party involvement - community participation in project planning and evaluation	Q4 2010 → continuation	<ul style="list-style-type: none"> <li>– contact with owners of lands on which geological drilling was carried out, payment for temporary lease</li> <li>– opening of the information office in Zawiercie</li> <li>– information activities: launch of the website, publication of brochures, publication of information materials in the local press</li> </ul>
	Q2 2013 – Q4 2014	<ul style="list-style-type: none"> <li>– 35 meetings with residents in the municipalities of Łazy, Zawiercie, Ogrodzieniec and Poręba</li> </ul>
	Q2 2013 □ continuation	<ul style="list-style-type: none"> <li>– launching of information and consultation points in the municipalities of Łazy, Zawiercie, Ogrodzieniec and Poręba, where the representatives of the company together with the invited experts answer questions of residents once a month</li> </ul>

Source: A substantive evaluation of the study „Environmental impact of the planned construction of zinc and lead mine in the Zawiercie region” carried out by Multiconsult Ltd. and identification of appropriate measures for environmental effects resulting from the proposed mine construction project, 2017

**Conclusions:**

- Despite over 1000 meetings with landowners regarding the drilling of wells, no significant objections to the mine were observed during this period. This could have been due to the payment for the land lease and no fear of exploration;
- People who are most involved in activities against the mine are people associated with the metallurgical and steel industry. They are concerned about competition and financial losses;
- Rathdowney does not inform residents systematically, which causes their anger. Information about strong local support is also not entirely true.

**Sources:**

<http://www.projektolza.com>

<http://niedlakopalni.org>

<http://www.rathdowneyresources.com/>

A substantive evaluation of the study “Environmental impact of the planned construction of zinc and lead mine in the Zawiercie region” carried out by Multiconsult Ltd. and identification of appropriate measures for environmental effects resulting from the proposed mine construction project, AGH University of Science and Technology, 2017

Environmental impact of the planned construction of zinc and lead mine in the Zawiercie region, Multiconsult Ltd., 2016

Separate from the case study above, the University of Lapland reviewed the English material on Rathdowney’s website, on which was posted a transcript of a public hearing. It is interesting to note the language that was used. Rathdowney stated they want to build relationships with residents based on respect and trust – and that takes time – and their goal is to present the community with a project that will meet the community’s expectations and be acceptable. To do so, they have done the following (according to the transcript):

- Meeting with the public at a very early stage of work, before the conceptual work begins.
- The company must get the community’s consent or they will not make further investments.
- When designing a mine, the main goal is to avoid any negative impact on quality of life of residents, including properties.
- The health of local residents is one of most important issues. The company does not expect local authorities to agree to the project if it has negative effects.
- Modern methods of exploitation and strict environmental regulations allow negative impacts to be minimized.
- Rathdowney pursues local employment and local spending policies. And local employees and local companies providing materials and services have priority for the construction and operation of the mine.
- Rathdowney devotes a lot of attention to performing all works in a manner that is friendly to local communities and the environment, respecting residents’ rights to a peaceful and safe life, as well as respecting their property rights to real estate located in the area where research is carried out.
- They have a policy of minimizing all possible interferences. Possible nuisances are minimal, temporary and very local.



- All works are regularly monitored for impacts to local communities and the environment. The work schedule is adapted to the expectations of residents.
- In addition to payments (such as access roads), Rathdowney is obliged to cover the costs of restoring the land to its previous state and to repair the possible damage caused as a result of the geological works.

## i) TYSFJORD, NORWAY

### *Tysfjord/Divtasvuodna*

Although Norway is not in the European Union or a partner in the MIREU project, there are important lessons to be learned from mining cases involving the Sámi peoples. Tysfjord/Divtasvuodna is one such example and has been provided courtesy of Florian Stammmer (Arctic Centre, University of Lapland) and the ARRAN project. It should be noted the case study has been extensively summarised for the purpose of the deliverable.

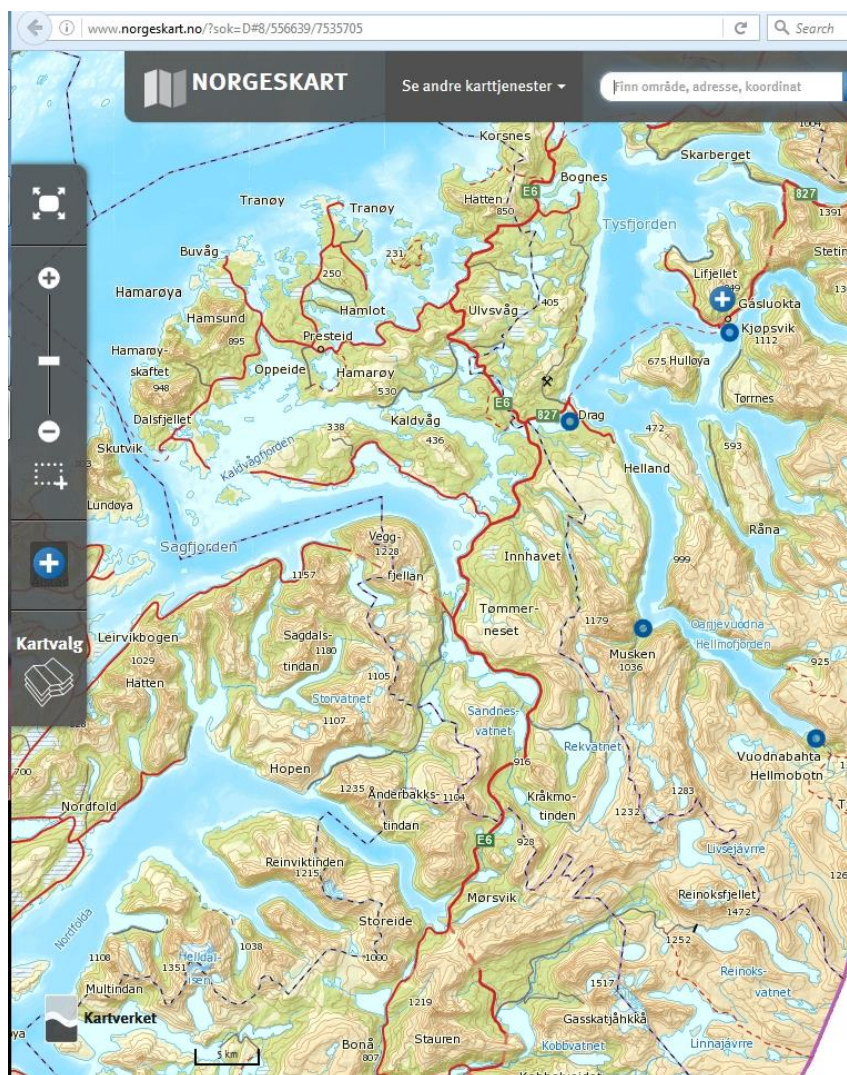


Figure 1 The two settlements, Drag / Ájluokta on the western shore of the Tysfjord, and Kjøpsvik / Gásluokta on the eastern shore, the main roads, the two factories Norcem and Quartz corp, the ferry connection, and the fjord with the settlements of Hellmobotn

Tysfjord is a municipality in the northern part of the Norwegian county of Nordland, on the eastern and western shore of the Tysfjord. Geographically, it hosts one of Norway's 'narrowest' points, with the Hellemofjord reaching up to 6,3 km to the Swedish border. The municipality has two main settlements, Drag / Ájluokta on the western shore of the Tysfjord, and Kjølpsvik / Gásluokta on the eastern shore, where the municipal administration is. Most municipal services have branch offices in Drag / Ájluokta, however. Officially the entire municipality is bilingual Lule Sámi and Norwegian.

### The Story:

Several main messages from this case emerge. The most important one is that industry can not only coexist with indigenous and local cultures in one place. Tysfjord shows that it can even enter people's identity. While not everybody would subscribe to this in Tysfjord, it is still safe to state that extractive industries have become part of the local livelihood and heritage, not least for the Sámi part of the population, throughout the last 100 years. Unlike for the Sámi in Finnmark, for the Lule Sámi in Norway mining has become a more integral part of their life and identity than reindeer herding. In almost every family (with whom the authors spoke) there is some experience of having worked in the extractive industry, mostly in the cement factory in Kjølpsvik / Gásluokta, less so in the Quartz factory in Drag. The cement company was happy to hire youngsters during summertime during school holidays.

Previous research has shown that identification of people with "their" industry is strongest among those who are actually involved in building it up. In Tysfjord, Sámi people were instrumental for the building up and maintaining the industry, throughout various boom and bust cycles. But their role is not recognised because they are Sámi, but because they were a local source of labour, alongside other local people. Maybe that is even more of a praise, when people are recognised for being good at what they do, and not by virtue of an ethnic identification only.

On the other hand, on the community level, the persistence of stereotypes and badmouthing was surprising to the fieldworkers. Racial discrimination on the base of Sáminess is still a lively part in the memory of the older generation. For example, those who worked in the cement factory but lived in the Fjords and not in the village of Kjølpsvik / Gásluokta were derogatively called *Fjording* (a "Fjorder"), which was equivalent to being primitive and rural, which also implied Sámi at the same time. Because with this also went a common stereotype that the Sámi are not fit for working in the industry. They cannot keep schedules, they do not subordinate under strict hierarchies, they are not reliable... . From the early days of industry this reputation persisted (Mikael Urhem interview). This was so strong that outside of the municipality anybody from Tysfjord would get labelled as a Sámi, even those who within Tysfjord would be considered Norwegians (Frank Jenssen, interview).

A contemporary example shows how such stereotypes persist: one evening during fieldwork in the pub in Kjølpsvik / Gásluokta, informal conversations with a truck driver for the cement factory unearthed this deep suspicion among the Norwegians about the Sámi that still has not disappeared. The driver told that 'those Sámi' live in these small communities, they are all



belonging to this strange religious sect (he meant Laestadians), they marry only among themselves, have therefore a lot of inbreeding, and on top of that widely spread domestic sexual violence that nobody controls. We could not believe what we were hearing. Later it turned out that this storyteller had himself some Sámi roots but hides them. Local media is also involved in cementing (!!! in a cement industry town) such stereotypes, though reporting such cases. A neutral foreign resident in town noticed that the coverage on such issues in the local media is clearly disproportionally higher among the Sámi, although he is sure that among the non-Sámi population the problem is by no means smaller. This again is indicative of the fact that the divide in the municipality is deep in people's head. While on the other hand, the industry is so much part of the local community history regardless of ethnic belonging that this case has potential for broader considerations of indigenous Arctic identity.

### Land rights

The situation with land rights is particular in Tysfjord, as Sámi people enjoy private land rights unlike in Finnmark. For a long time Sámi have owned not only the plots where they have their houses, but also the area surrounding these plots, the forest, rock and mountain landscapes in the inner Fjords. For both land categories, ownership is private, but the plots are owned individually, where the lands surrounding the settlements / hamlets are collectively owned by families / clans, as for example in Hemerbotn (Heidi Anderson interview). Sámi land use is documented there since the 18<sup>th</sup> century. Other than in northern Norway, only 20-30% of the land is controlled by the state. The local division in Tysfjord is that the Norwegian and industry sphere is at the outer Fjords, while the inner Fjords are perceived as being very important for Sámi identity. Therefore, industry should be kept out from there (Interview Heidi Andersson). This issue seems to be more pressing now that the fish farming industry advances further to the inner Fjords. The situation is more complicated with the rights to the water resources. The Fjords are not privately owned, and licences for fishing and for farming, as well as doing anything on the seabed, are given out by the Norwegian state. On the other hand, when the Norwegian state wanted to turn the Fjord into a strict nature reserve, the Association of Sámi land owners opposed the suggestion and came up with an alternative of “preserve and use” rather than just conserve. It was perceived as another example of the distant Norwegian state making decisions that ignore century old land use traditions that Sámi people have had in the area.

### Role of the state

Throughout all conversations with all actors involved, there seems to be a broad support in Tysfjord for the strong role of the state that nobody seems to question. This takes responsibility off non-state actors in companies as well as indigenous peoples representative to agree on any special conditions for the coexistence of industry with indigenous livelihoods. There is a broad belief that the system of obliging companies to the common good of the nation through high tax payments and state redistribution of the money is a sound base for all actors involved. Interestingly, also on the indigenous peoples side nobody expressed discontent or need for changing anything significant. This is probably the reason also that international best practices and guidelines are of minor importance in this case, because the Norwegian state has set higher standards than most of the international documents would assume (according to company officials, but also some Sámi informants). The Norcem manager in Kjøpsvik / Gásluokta seems

to have formulated a widespread opinion on this: where the state is so strong as in Norway, international best practices and guidelines might water standards down locally rather than improving them. Such standards are more needed in cases where the state does not efficiently regulate industrial activity and its significance for the common good. Therefore, all of such standards were more put in place for cases in developing countries, where guidelines fill the gap left by poor state laws or the lack of their implementation. The idea is that where there are laws and other state regulatory mechanisms that work and contribute to the good of the nation, there is no need for international best practices.

The only document of significance was – according to our Sámi conversation partners – the ILO convention 169. This relates again back to the importance of the state, because ILO 169 is the one international document that has legal force in Norway. Its implementation is thus mandatory according to national law. Thus, conversation partners from all sides were very trustful in the state for shaping the relations between industry and indigenous livelihoods. This is particularly interesting due to the fact that from reindeer herding Sámi activists we heard very strong complaints to the Norwegian state about the poor quality of Norwegian mining legislation and regulation of benefit sharing in the mining industry. While the state would do very well in administering oil revenues for the good of the nation, its standards for mining would be many decades behind. Interestingly, in Tysfjord, a municipality with 100 years mining history, such a perception did not seem to prevail. This is probably due to the fact that the industry has not claimed new land from local residents for decades, and is operating in a very limited space.

This broad support for the role of the state raises the question of what other cases could learn from Tysfjord for their own practice. Would this be a good showcase of a successful coexistence of industry with indigenous peoples that *works* locally?

#### Social significance of companies

Sámi partners in our fieldwork did not perceive a need for the companies to step up funding for boosting Sámi livelihood, culture, or business. Therefore, questions of such kind that would be of crucial importance in other cases were almost seeming to be unexpected for industry and indigenous representatives alike. For example, if there would be any company compensation for damage of industry to Sámi livelihood, or socio-economic agreements with local and indigenous actors, or indigenous peoples development plans, or special programmes to promote indigenous culture, or grant programmes for local business development, and the like. For all of those fields there is Norwegian government money available, for which interested Sámi actors can apply. Partially this money is being administered through the budget of the Sámi parliament, and partly through the Norwegian ministries. So while the Heidelberg Cement sustainability report explicitly states that education, training and culture are fields where the company supports people according to local needs, apparently there was not much of a perceived need, and nobody complained that the company could do more.

The companies have direct agreements with the municipality, the contents of which is confidential. They also have a framework agreement with the municipality, as part of which they pay a compensation for extracting raw material from municipal land (limestone). The price for this was agreed many decades ago, and within the existing agreement, the sum can only be

corrected according to the inflation of the Norwegian currency. According to the mayor of Kjølpsvik / Gásluokta, the sum that Norcem pay for this activity is not very significant for the municipal budget. The only thing that companies do locally is in-kind on-the-spot support in matters of running the village (in the case of Norcem). Like in other cases of single industry towns across the globe, the company has been outsourcing most of their non-industry related activities to the municipality. In the past, the cement factory helped most people for example to lay the concrete foundations for their homes. People used company equipment and material to build and maintain the village. Nowadays Tysfjord is considered the poorest municipality in Norway, which is barely capable of maintaining the facilities that it ‘inherited’ from the outsourcing exercise of the cement industry. When it was decided to co-sponsor the reconstruction of the sports hall in Kjølpsvik between the factory and the municipality, the latter was brought to the verge of bankruptcy through this project. (The political opposition claims that this is more due to poor management of the current leadership. It is safe to say that in Drag being the more diverse of the two settlements, the social significance of the extractive industrial company is less than in Kjølpsvik.

Looking from the viewpoint of the people, there is a noticeable generation gap in the significance of the industry: several of the older generation have their identity built among others also on their industry work. At the same time, particularly the cement industry has shrunk significantly, and is considered not very modern in younger people’s eyes. Moreover, several parents have stated that they would not prefer their children to work for the industry if they had a choice. We wonder if this will mean a decrease in social significance of the industry for the local population in the next generation.

Even less significant socially is the most recent and most dynamic industry in the Fjord: fish farming. It employs relatively few people, but it brings a very high profit. The problem is only that none of it stays in Tysfjord: all revenues leave the municipality, and there is not much local employment involved in running the fish farms (only one of our fieldwork partners had had some experience of working on a fish farm).

## Conclusion

To our view, while the support for industry and its local embeddedness in the municipality is exceptional and may be exemplary, Tysfjord cannot be considered an ideal case for other reasons. As outsiders it caught us by surprise that the population is so deeply divided, first and foremost in their heads, between Sámi and Norwegian, between Drag and Kjølpsvik / Gásluokta, between political parties, and full of stereotypes that are so present that they develop their own dividing energy on any occasion. On the other hand, the identification of people with the industry goes very far. It is not very well accepted or known in the Arctic that indigenous peoples can have an identity component as extractive industries workers as well. Tysfjord stands there along the same lines as Qullissat, a Greenlandic coal mining town, the birth place of the former prime minister Kuupik Kleist, to whom goes the credit of having publicly flagged the existence of an Arctic indigenous extractive industries identity.

### 8.1.3 Establishing the SLO framework sources of information

#### a) **ANDALUSIA**

A test questionnaire was sent to the MIREU partner for Andalusia (DGIEM, Dirección General de Industria, Energía y Minas – Junta de Andalusia), who returned the questionnaire on 21 May 2018. The summary of Andalusia is derived solely from that questionnaire.

#### b) **CASTILLA y LEÓN**

A test questionnaire was also sent to the MIREU partner for Castilla y León (SIEMCALSA), who returned the questionnaire on 16 April 2018. The Chief of Mines also reviewed the questionnaire.

REMIX – smart and green mining regions of the EU, Interreg Europe Programme

Status report from Instituto para la Competitividad Empresarial de Castilla y León (former ADE) or, in English, the Agency of Innovation, Business Financing and Internationalization of Castilla y León. The report was prepared by Project Manager Ana Diez de la Rosa.

REMIX – Peer Review Valladolid, 20 March 2018

SWOT Indicators for Castilla y León prepared by SIEMCALSA

#### c) **CORNWALL**

REMIX – smart and green mining regions of the EU, Interreg Europe Programme

Status report of the University of Exeter. Prepared by Research Fellow Dr. Elizabeth Adey, Professor of Applied Mineralogy Frances Wall, and Professor of Mining Education Kip Jeffrey.

Scrapbook of media articles and online content, with notes from public meetings provided by Kathy Hicks and Frances Wall, MIREU partners, University of Exeter, for use as internal (confidential) MIREU documents to inform the SLO toolkit.

#### d) **LAPLAND**

REMIX – smart and green mining regions of the EU, Interreg Europe Programme

Status report of Regional Council of Lapland. Prepared by Project Manager Ilari Havukainen.

The Finnish Mining Industry : An Overview – 2012. PwC, 12 October 2012

Ejolt Fact Sheet 037: Talvivaara Mine Environmental Disaster, 23 July 2015. Publication developed as part of the project Environmental Justice Organisations, Liabilities and Trade (EJOLT) (FP7-Science in Society-2010-1).

Pamela Lesser, Leena Suopajärvi, Timo Koivurova. CHALLENGES THAT MINING COMPANIES FACE IN GAINING AND MAINTAINING A SOCIAL LICENSE TO OPERATE IN FINNISH LAPLAND. Mineral Economics 2016.

Timo Koivurova, Arild Buanes, Larissa Riabova, Vladimir Didyk, Thomas Ejdemo,

Gregory Poelzer, Päivi Taavo, Pamela Lesser. “Social license to operate”: a relevant term in northern European mining? Polar Geography 2015.

**e) SAXONY, GERMANY**

GKZ partner contribution

SWOT Indicators for Saxony, MIREU Project (WP2)

General Regional Background Information for SWOT Analysis – Saxony by Meng Chun Lee and Dorothee Gruenholz.

Dr.-Ing. Habil. Manfred Goedecke (Industrie- und Handelskammer Chemnitz) for the Konferenz EU-Projekt MIREU in Dresden 1 März 2018. PPT entitled *Sächsische Aktivitäten zur Verbesserung des Standortfaktors Bergbau – und Industrie-akzeptanz*.

Dr. Marco Roscher, Saxore Bergbau, PPT presentation at the first SLO Workshop in Rovaniemi entitled *Voices from the Front Lines: Major Challenges of Junior Mining Companies*

**f) STEREA ELLADA**

NTUA partner contribution

MinLex Project: "Study –Legal framework for mineral extraction and permitting procedures for exploration and exploitation in the EU"

RIS3 Regional Assessment: Central Greece, A report to the European Commission, Directorate General for Regional Policy

**g) STYRIA, AUSTRIA**

MinPol and Leoben partner contributions

REMIX – Status report of Montanuniversitaet Leoben. Prepared by Project Manager Alexander Tscharf

REMIX - Report of 2<sup>nd</sup> PRV at Montanuniversitaet Leoben

Case study source: *MIREU – Region Styria – AUSTRIA/Case study/Internal working document 09/05/2018*, compiled by Angelika Brechelmacher<sup>1</sup>, Jose Cabello<sup>1</sup>, Diego Murguia<sup>1</sup> & Günter Tiess<sup>1</sup>

MINLEX cases provided by MinPol

**h) UPPER and LOWER SILESIAN VOIVODSHIP, POLAND**

AGH partner contribution

REMIX – smart and green mining regions of the EU, Interreg Europe Programme Project Peer Review meeting, Tuesday 12.12.2017 for Lower Silesia

REMIX – smart and green mining regions of the EU, Interreg Europe Programme Status Report of Lower Silesian Voivodeship

SWOT Indicators prepared for Lower Silesia by AGH UST for MIREU project (WP2)

Website for Project Olza <http://www.projektolza.com/s/PytaniaOdpowiedzi.asp>



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## i) NORWAY

### Tysfjord / Divtasvuodna Case description

The case study was kindly provided by Florian Stammer, Research Professor at the Arctic Centre, University of Lapland as part of the ARRAN Project. Sources for the case study are below.

Blomlie, Trond 2012. *Treasure in the mountains*. Narvik: Museum Nord

Books by Frank A. Jenssen (Sven please fill in) <http://www.galleri-lofoten.no/en/frank-a-jenssen/books>

<http://www.norcem.no>

<http://www.thequartzcorp.com/en/about-us/environmental-responsibility.html>

<http://www.heidelbergcement.com/en/responsibility>

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\*STAKEHOLDER INFORMATION WAS ALSO SUPPLIED BY WP2.

### 8.1.4 Minlex

Even though the social licence is not a regulatory permit required for any company to advance in a mineral development project, there is an increasing relationship between the opinion of stakeholders (stance in the face of exploration or extraction, either local, national or global ones) and the prospects that the activity will go ahead (e.g. obtaining the necessary permits). Moreover, the following trends are observable:

- the process for granting mining permits are generally less conflict-ridden than that for granting environmental permits (Growth Analysis 2016<sup>36</sup>)
- there are often long delays in the processing of environmental permits (Growth Analysis 2016)
- the process of granting permits and the amount of time it takes is not simply a product of countries' legal and administrative systems, it is also a product of authorities' resources, competence and ability to handle conflicts of interest and seek compromises (Growth Analysis 2016)
- The average length to obtain a mining permit varies among MSs and depends on the mineral and the project's size, location and complexity; e.g. if a project is large and complex, a longer permitting time is often needed due to environmental studies (MINLEX)
- With some exceptions, in general there is an insufficient integration of land use planning and permitting procedures which has (as exemplified in the report, e.g. in Austria or Denmark) the potential to facilitate permitting procedures, avoid appeals, increase permitting success rates and confer investment security to prospective investors (MINLEX)

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<sup>36</sup> <http://www.tillvaxtanalys.se/en-english/publications/pm/pm/2016-03-31-permits-for-mining-and-environmental-aspects---an-international-comparative-study.html>

- One of the most effective ways to streamline permitting procedures is to engage in early and meaningful consultation procedures with the authorities and the public on the basis of high quality environmental studies and guidance documents (e.g. EC's Non-energy mineral extraction & Natura 2000 guidance) (MINLEX)

During the MINLEX project we collected information on case studies where there were conflicts during the permitting procedure due to different aspects, some of which involved social licence issues, i.e. opposition by stakeholders to a proposed project. We gathered detailed information on 7 case studies, of which of relevance are the following:

1. **Austria – Quarry extension and public participation:** A citizens' initiative appealed against the extension of a diabase quarrying area in Salzburg region. In its judgment of 24 February 2006, the Supreme Court as the court of last resort dismissed their complaint in its entirety and upheld the decision by the Umweltsenat / Environmental Senate (2nd instance). Thus, the first decision by the Government of Salzburg (EIA ("UVP") authority 1st instance) to give permission to Diabaswerk Saalfelden GesmbH for the extended extraction of diabase was reinforced.
2. **Finland – Rompas-Rajapalot exploration project/Natura2000 area:** Conflict over Mawson's discovery of a gold deposit with 80% of the mineralisation within Natura2000 areas in Northern Finland. The case took place during the exploration phase, the exploration permit under appeal concerns in part areas that are part of the European Union's Natura 2000 network. The legal question in the case was whether 1) the permit provisions included in the exploration permit were sufficient taking into consideration the requirements of the law and the characteristics of the area in question and 2) whether the public hearings held on the exploration permit application were sufficient, 3) as well as whether the mining authority should have taken earlier actions of an affiliated company into account when deciding on the permit. The outcome of the evaluation given by the Supreme Administrative Court resulted in no change being made to the decision of the lower instance. Judgment in favour of the defendant, Mawson Oy.
3. **Case 4 – Hungary – Landowners/exploration rights for diatomite:** The mining inspectorate issued an exploration right on 23 February 2006 for a diatomite resource acreage. The landowners have not received this resolution. In 2007 it also approved the exploration TOP for 2007-2011 period, against which the landowners appealed. The second-instance confirmed the first-instance permit with one condition that the licensee has to set an agreement with landowners prior to the start of the activity.

The landowners were not satisfied with this outcome and set an appeal at the court. The court refused their claim. They went on to the Curia with their application. The Curia affirmed the judgement.

In its justification, the Curia expressed that the TOP permit was valid since already at the exploration right permit was not valid because the inspectorate had not informed the landowners. The TOP permitting also was unlawful since the inspectorate did not invite the environmental inspectorate for its consent, although there was a Natura2000 site on the area.

In the repeated permitting procedure, the inspectorate refused the exploration TOP on 16th February 2011. The company appealed but the second-instance confirmed the first-instance referring to the judgement of the Curia. The case went on to court and later ended up in front of the Curia. The appellant this time also referred to several pieces of EU legislation, inter alia the TFEU (Art. 49). Nevertheless, the Curia reinforced its earlier judgement.

4. **Case 6 – Sweden – Bunge Ducker/Natura2000 area:** the case is about an environmental permit requested for the quarrying of limestone at the Bunge Ducker limestone quarry in Northern Gotland, Sweden. The defendant is a mining company and the plaintiff includes the Swedish Environmental Protection Agency, the Municipal Environment and Health Committee and several non- governmental organizations and concerned individuals.

At MINLEX we also collected a database of 129 court cases related to non-energy extractive industry (NEEI). A summary of results related to those cases is given below. Even though we did not include SLO as a category in the subject of court cases, SLO issues are related often to complaints about risks of environmental pollution (dust or noise pollution, water pollution), incompatibility of mining/quarrying with nature conservation, low-quality EIA studies, so cases related with those subjects may act as proxies to SLO issues.

Access to justice in environmental matters, inclusive during permitting procedures, is widely extended among the MSs. ***During this study a database of 129 court cases related to NEEI permitting procedures was collected from all MSs.*** The representativeness of such database is limited due to various factors<sup>37</sup>; however, it provides a broad overview of how permitting procedures are affected by judicial procedures.

The quality of the data collected prevents an accurate classification of court cases per mineral type. However, we have identified that only 12 cases are associated with metals extraction. As the number of metals extraction sites in Europe is low, we can assume that that most of the results (91%, 117 cases) refer mainly to court cases associated with construction and industrial minerals extracted in quarries (or explored to be extracted in quarries), as the number of cases associated with metals extraction is low (9 %, 12 cases).

Concerning the question of ***who was the plaintiff***, findings show that ***companies (operators/developers) represent the largest group (53 %), followed by NGOs (14 %), municipalities (10 %), authorities (7 %), civil groups<sup>38</sup> (7%), neighbours (6 %) and others (2 %).*** A classification of the available cases into first-instance or not shows that ***most of the analysed cases (56.6 %) were appeals***, and only 11.6 % first-instance (in 41 cases the information available did not allow classifying them by instance).

With regards to the development phase, a total of 109 cases were eligible to be classified. The ***majority of the cases (70 %) address the extraction phase, 20 % the exploration phase*** with only six cases addressing both exploration and extraction. Only two cases are related to post-extraction (waste management in one case of aggregates<sup>39</sup> and another on metals<sup>40</sup>).

In relation to the subjects of cases, a total of 106 cases were eligible. Findings indicate that while ***permitting administrative issues and other procedural questions comprise nearly one third of the court cases, 36 % of the cases are associated with nature conservation*** (including cases around Natura 2000 sites which represent 12.4 %) ***and various environmental issues***, including access to justice in environmental matters and public participation (3.8 %). The most

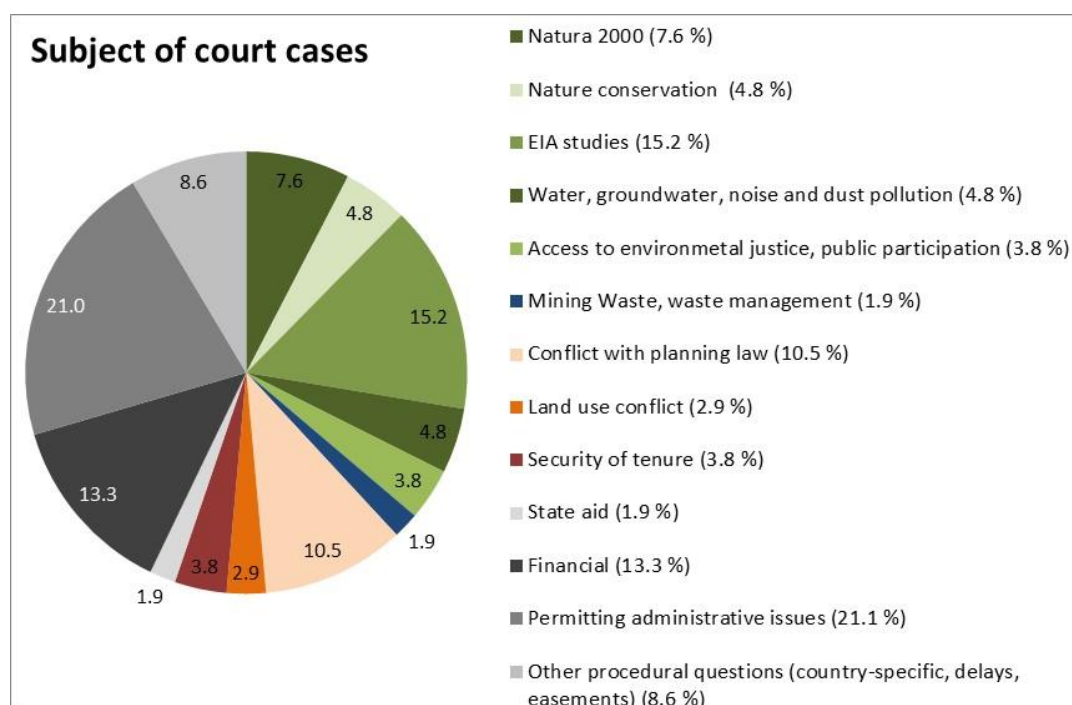
<sup>37</sup> The database consists of court cases selected by the country experts according to what they considered important, and their field of expertise (experts were in general geologists and not lawyers). Second, it should be noted that the quality of the court cases received was very different and, due to the limited information available, for 28 % of the cases it could not be ascertained which minerals were being addressed in the court cases and for 29 % of the cases it could only be ascertained that they address minerals extracted in quarries.

<sup>38</sup> These are private persons (individuals) in some cases associated with a municipality (e.g. AT case no 2005/04/0115 + 2005/04/0116 + 2005/04/0117) or with an NGO (e.g. ES private persons and an ornithologist NGO case no. 147/2011)

<sup>39</sup> In the UK, case reference EWCA Civ. 1149

<sup>40</sup> In HU, case reference Kfv. II. 37.520/2014/5

frequent cases relate to EIA procedures (15.2 %). Examples of controversies include cases when the operator did not conduct an EIA or conducted it with shortcomings<sup>41</sup>. In the field of nature conservation, the first important question was the conflict between public and private interest. In most cases the protection of the public interest is in focus. In one case in France, the permit was annulled upon the grounds that the “*overriding public interest, including those of a social or economic nature*” had not been ascertained, since the only interest of the proposed quarry concerned local employment<sup>42</sup>. *Other cases, related to exploration for metal ore deposits, showed that, without the infringement of environmental values and interests, the exploration activity can be carried out*<sup>43</sup>.



**With regards to public participation court cases reveal that the exclusion of the public during the permitting processes results in the invalidity of the procedure.** In various cases the Court annulled the mining permit because of the violation of the right of the public to be informed<sup>44</sup>. In one case the Court referred to rules on public participation of the Aarhus Convention and observed that the Convention is an international treaty which takes precedence over national laws<sup>45</sup>.

In relation to the **legal background**, it was found that two thirds of the court cases relate to national laws and decrees. However, in several cases, the national law referred to by the Court was the legal act which implemented the relevant EU Directive. In 41 cases the direct effect of the EU legislation can be mentioned as directly relevant. 17 of them are where public participation on environmental matters was at least one of the basis of the appeal. The Nature Directives are cited in 8 court cases, the EIA Directive in 7 other cases. Seven court cases were based on the state aid issue and one of the Spanish cases refer to the TFEU. The Extractive Waste and the Landfill Directives are referred in three cases. It was concluded that, although most cases do not refer directly to EU legal framework, cases show that **EU law is placed in**

41 See e.g. case No. 10LY02049, France; case A-2532/2013, Lithuania

42 See case No. 1502035, France

43 All cases in Finland: KHO, Dnro 1068/1/00, Finland; KHO, Dnro 1934/1/14, Finland; KHO, Dnro 483/1/13, Finland; KHO, Dnro 1432/1/13 and 1437/1/13, Finland

44 Cases No. 14LY03687, France; No13MA03284, France; No. 13NT02099, France; II. 37.301/2012/9, Hungary

45 Case 3 Szp/18/2012, Slovakia

*the background as EU directives are implemented into the national law.* Court cases have also indicated the existence of the veto right in the hands of local municipal councils in Lithuania and Slovakia; it has been reported that such right, in view of recent experiences, is a discouraging factor for new investments<sup>46</sup>.

*We can conclude that a time-consuming and excessively lengthy permitting process, due to appeals on the first instance decision or successive appeals, does not benefit any of the stakeholders, neither those in favour nor those opposed to an extraction project. **From the perspective of the public administration**, it increases the workload of judges and the administrative personnel and makes permitting procedures more expensive. **From a wider societal perspective**, even though it may take time, access to justice and the widespread rights to lodge claims and appeals is a positive aspect as it exerts pressure on companies to improve their performance and strengthens governance. Companies engaging in poor social and environmental performances may face adverse results in appeals and other more responsible companies may benefit, i.e. good competition may be promoted by access to justice. However, **from the perspective of an investor applying for a permit**, lengthy permitting processes due to appeals, in some cases even after the developer went through a long process to obtain the necessary permit(s), not only exerts a financial burden (of special importance as a barrier to SMEs) but also increases the uncertainty of whether operations will be allowed to start. IMA-Europe recently conducted a survey among its members and identified appeals to granted permits as one of the major bottlenecks in the permitting process (Shtiza, 2016).*

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<sup>46</sup> For further details see the Lithuania and Slovakia country reports in the Annex