



# SOCIAL LICENSE TO OPERATE – A POLICY-ORIENTED LITERATURE REVIEW FOCUSED ON THE WIND, MINERAL AND MINING INDUSTRIES

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## SUMMARY

The objective of this report is to provide input to a larger research project funded by Vinnova called “Sustainable Industries,” which focuses on how industrial establishments can be more sustainable in terms of *inclusion* and *value creation & meaning building*.

The report is a systematic scientific literature review of a selection of relevant and highly cited articles on the topic of Social License to Operate (SLO). The report focuses on peer-reviewed articles within the field of resource extraction (mining) and wind energy in the Nordics and similar developed countries.

The study addresses whether the academic literature on SLO can offer lessons for how to mitigate land conflicts, which are made all the more salient by the “green transition's” need for minerals and renewable energy expansion.

Our results suggest that the quest for a SLO (involving a well-designed SLO-process) can help mitigate land conflicts, achieve more sustainable outcomes, reduce costs, and save time in the permitting process.

We identified several factors from the literature that are important for achieving a SLO – a literature that we find to be well-studied with a high degree of consensus around the central factors. Key factors are early engagement, gaining mutual trust through high quality communication, perceived procedural fairness, and meeting essential community demands. The drawbacks and risks are also well-documented and discussed in this report. The SLO process itself can help address these drawbacks by identifying questions or aspects that are unresolved and/or not explicitly addressed through the legal process.

Overall, the research results reviewed here offer important and valuable knowledge that can be used to mitigate conflicts. Opposed to other measures such as CSR or ESG, SLO is goal-oriented. Further, the SLO process is perpetual and needs to be maintained over time. Importantly, even if the factors identified as key for achieving a SLO are likely to improve dialogue, cooperation and trust, there is no guarantee that the process will result in a SLO. Sometimes the conditions in terms of geography, competing land use,



underlying values, indigenous people's rights, and company operations are simply incompatible.

Ultimately, a well-designed SLO process is necessary but not sufficient, as proactive political decisions and stakeholder engagement are complements to legislation when addressing land use conflicts.



## Sammanfattning

Syftet med denna rapport är att bidra med insikter till det Vinnova-finansierade forskningsprojektet ”hållbara industrier”. Projektet fokuserar på hur industriella etableringar kan bli mer hållbara gällande inkludering, värdeskapande och meningsbyggande.

Rapporten är en systematisk litteraturgranskning av relevanta och väl citerade artiklar kring ämnet Social License to Operate (SLO). Den fokuserar på referentgranskade artiklar om resursextrahering och vindenergi i de nordiska-såväl som liknande (industri-) länder.

Vi vill i första hand ta reda på vad den akademiska litteraturen kring SLO kan erbjuda när det gäller kunskap om hur man kan minska markanvändningskonflikter kopplade till den gröna omställningens behov av mineraler och den förnyelsebara energiexpansionen.

Våra resultat tyder på att strävan efter en SLO (inklusive en väl designad SLO-process) kan hjälpa till att mildra markkonflikter, uppnå mer hållbara resultat, minska kostnaderna och spara tid i tillståndsprocessen.

Vi identifierade flera faktorer från litteraturen som är viktiga för att uppnå en SLO - en litteratur som vi finner vara välstuderad med en hög grad av samsyn kring de centrala faktorerna. Nyckelfaktorer är tidigt engagemang, att få ömsesidigt förtroende genom högkvalitativ kommunikation, upplevd rättvisa i förfarandet och att möta de viktiga krav från berörd lokalbefolkning. Risker och nackdelar behäftade med SLO-processen är också betydande och diskuteras i rapporten. SLO-processen kan å andra sidan bidra till att identifiera och lyfta fram frågor eller aspekter som är olösta och/eller inte uttryckligen behandlas genom den juridiska processen.

Sammantaget ger forskningslitteraturen om SLO viktig och värdefull kunskap som sannolikt kan bidra till att mildra markanvändningskonflikter. Till skillnad från andra åtgärder som CSR eller ESG är SLO målinriktat. SLO-processen går aldrig i mål utan måste kontinuerligt underhållas. Och även om de faktorer som identifierats som nycklar för att uppnå en SLO sannolikt generellt sett förbättrar dialog, samarbete och förtroende, finns det ingen garanti för att processen kommer att resultera i en SLO. Ibland är villkoren när det gäller geografi, konkurrerande markanvändning, underliggande



värderingar, urbefolkningens rättigheter och företagens verksamhet helt enkelt oförenliga.

I slutändan är en väl utformad SLO-process nödvändig men inte tillräcklig, eftersom proaktiva politiska beslut och engagemang av intressenter är komplement till lagstiftning när man tar itu med konflikter om markanvändning.



## 1. INTRODUCTION

The green transition offers potentially significant socioeconomic benefits such as economic growth, green jobs, and health benefits to reduced reliance on fossil fuels (UNEP, 2011). But the transition itself – as with any adjustment from business as usual – is not friction-free. Transactions costs arise as dynamic economies adjust to changing consumer demand and need for new and unique inputs. For example, the demand for electric cars and renewable energy sources like wind and solar not only make old inputs obsolete, but also requires the extraction of new raw materials and new production processes. This, in turn, raises the likelihood of local land-use conflicts around the citing of new *energy and mineral development projects* such as new mining sites, wind parks, and other types of land exploitation that aim to support the green transition. Examples can be seen in the Nordic countries in the establishment of an iron mine at Gällö, in northern Sweden and the lime quarry at Slite on Gotland.

Generally, the conflicts pit private companies against residents. They arise even in countries with well-developed permit processes, suggesting that democratically-driven processes (like those seen in the Nordic countries) may not be sufficient to ensure agreement on the local level. The conflicts are often complex, involving several different types of actors with different types of needs and interests and are characterized by contentious issues such as the distribution of the project's costs and benefits across time and space and how they can affect different societal groups (MacPhail et al (2022). The practical result is that these conflicts often lead to long delays in the permit process and even rejection of the legal permit. Failure to obtain a SLO ranks as a major business risk according to Ernest & Young (2020).

The challenge of gaining local acceptance for these types of projects has led to an alternative approach, first proposed over 25 years ago, that focuses on socially acceptable norms and behaviours rather than (or in addition to) meeting legal requirements. In 1997 Jim Cooney proposed that in addition to a legal permit it may also be important for private companies to obtain a "social permit". Cooney's idea has since attracted significant interest from



academics, policy makers, and companies, who have adopted and built upon the concept of a “Social Licence to Operate” or SLO.

Earlier academic publications have critiqued the concept, while more recent publications have suggested specific practices and approaches for how companies can obtain a SLO, including proposals for concrete indicators and specific processes that should be followed. The salience and applicability of such conclusions is of particular interest today given the need to support the development of new businesses and new innovations that are critical for the on-going green transition.

The purpose of this study is to conduct a structured peer review of the academic literature to better understand how the SLO concept has been characterized, how it has been applied, and what we can learn with respect to decision-making processes around the siting of *energy and mineral development projects*. The objective of this report is to provide input to a larger research project funded by Vinnova called “sustainable industries,” which focuses on how industrial establishments can be more sustainable in terms of *Inclusion* (How the permit processes can be conducted in a more inclusive way, where local populations feel that they get real opportunities to influence it) and *Value creation & meaning building* (How local people can be involved in industrial establishments and changing land use in a way that creates meaning and long-term values for the host society, in the local economy, nature and culture). The scope of the literature review is somewhat limited, focusing on articles that (1) address the application of SLO to mining and wind power establishments; (2) are relevant for developed countries, especially Northern Europe; and (3) are empirically focused.

The results will be used by Vinnova to increase its understanding of how the innovation system can support development towards a socially sustainable and competitive industry. The results may also be of value for researchers since the analysis provides a review of the most recent literature.





## 1.1 Research questions

The literature review aims to address the following research questions:

- **Definitions.** How has the “Social License to Operate” concept been introduced, defined, and studied in academic literature?
- **Need.** What is the societal challenge(s) that a SLO is trying to solve? And who are the key actors that are affected by, and affect, a SLO?
- **Contributions.** What are the contributions of the SLO concept in terms of addressing local land use conflict? For example, what are the key factors and mechanisms by which a company can obtain a SLO?
- **Drawbacks.** What are the drawbacks and challenges associated with the concept and its implementation?
- **Lessons learned and implications.** What can we learn from how the concept has been applied in empirical settings, including the possible implications associated with policy interventions?

## 2. METHODS

We applied a systematic approach to identifying and reviewing the literature, as described below.

### **Step 1: Initial search (Scopus)**

We searched Scopus for English peer-reviewed articles that included either of the following in the title “social license to operate” OR “social license to operate” (which accounted for slightly different English spellings). *Result: 164 articles*

### **Step 2: Preliminary selection (title relevance)**

Each researcher (independent of the other) conducted a subjective review of the 164 titles based on a perceived relevance score (relevant = 1, not relevant = 0, uncertain = 0.5). The subjective review was based on (1) geography (preferred focus on Sweden, Nordic countries, and other industrialized countries (e.g., Australia, Canada), while excluding developing countries and (2) activity (focus on mining/minerals and wind energy). The resulting list was then discussed, with a focus on where the individual researchers’ relevance scores differed. *Result: 69 articles*

### **Step 3: Final selection (citation score and abstract)**



We sorted studies based on frequency of citation, using a standardized score (score= total citation divided by years since publication) and selected the top 30 articles. Finally, we added additional articles that were not identified by the Scopus title-based search but deemed relevant based on input from the Vinnova research team<sup>1</sup>. This resulted in 30 articles.

Then each researcher (independent of the other) conducted an additional and subjective review of the remaining abstracts to ensure relevance based on the aim of the study. Where possible, we prioritized (1) case studies that included in-depth interviews/empirical evidence rather than theoretical papers and (2) articles described as “a literature review”). *Result: 25 articles.*

#### **Step 4: Data collection (reading)**

The two researchers divided up responsibility for comprehensive reading of the 25 selected articles. The data collection consisted of summarizing the articles with respect to 11 parameters (Table 1). These parameters are based on the original research questions (Chapter 1.1), but were revised and consolidated slightly during the data analysis.

#### **Step 5: Data analysis (summary)**

The two researchers divided up responsibility for analyzing how the 25 articles addressed the 11 parameters, which formed the basis for our Results (Chapter 3) and Discussion (Chapter 4).

**Tabell 1** Summary of 11 parameters analyzed across the studied literature. The results are consolidated and presented in Chapters 3.1 – 3.6.

<b>Parameter</b>	<b>Description</b>
<b>Aim</b>	A short description of the article and its aim, with a focus on how it addresses the SLO concept.
<b>Key conclusions</b>	A summary of the article’s major conclusions
<b>Definition</b>	How the article defines the SLO concept (e.g., by reference to earlier articles and cited definitions and/or through the authors’ own words.
<b>Perspective</b>	The article’s perspective on SLO – i.e., whether the authors consider it to be a valuable contribution or whether the authors are critical to its use.
<b>Need</b>	The article’s starting point with respect to why the SLO concept is need and what problem(s) it tries to solve.

<sup>1</sup> See e.g., Cooney, J. (2017); Barakos & Mischo (2021); and MacPhail, Lindahl. & Bowles (2022).



Parameter	Description
<b>Whose need</b>	Whose problem does it solve?
<b>Factors</b>	What the article identifies as key factors for establishing a SLO, such as certain pre-requisites that should be in place before it can be effective – either theoretically or in terms of practical operation of the concept.
<b>Drawbacks</b>	Drawbacks of SLO
<b>Evaluations</b>	Evaluations of SLO in practice – does it work Conclusions in literature with respect to its usefulness? Does it work?
<b>Implication</b>	Policy implications/recommendations Does/should govt do something to encourage SLO (or discourage??)
<b>Aspect</b>	The predominant aspect a SLO is designed to address such as e.g., <i>environmental</i> (e.g., impacts on nature, water/air quality, habitat, species, pollution, etc..) or <i>social</i> (e.g., aspects related to social cohesion, green areas for recreation, employment, dividends from the operation, etc.)

### 3. RESULTS

The 25 articles included in this literature review came from a variety of journals in the fields of energy and natural resource management, industrial ecology, economics, public relations, communication, and physical geography. Although the first known mention of the concept in the peer reviewed literature was in 1998, our articles cover the period between 2012 and 2022 (with 14 of them after 2016).

In the sections that follow we summarize key findings according to the research questions identified in Chapter 1.

#### 3.1 Definition of a SLO

A SLO (social license to operate) involves both environmental and social aspects. The environmental aspects include themes such as air pollution, water, biodiversity, and climate. The social aspects include social capital<sup>2</sup>, safeguarding institutions, and societal effects related to development projects. Coined in 1997, the term highlights the importance of companies better

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<sup>2</sup> Definition: the networks of relationships among people who live and work in a particular society, enabling that society to function effectively



understanding challenges in managing political and social risks around their projects (Cooney, 2017). The SLO is related to sustainable development and serves as an operationalization of CSR to build long-lasting engagement with local communities. It is also linked to stakeholder management/engagement, benefits sharing, and community development. Generally, a SLO reflects the broad approval of a company's operations from the perspective of local communities, including a wide variety of stakeholders (Prno, 2013; Hall & Jeanneret, 2015.; Parsons et al. 2014). As an informal agreement between at least two parties, a SLO revolves around trust, differing values, and legitimacy. As it is a normative construct, its informal nature distinguishes it from a concrete, legally binding document (Demuijnck & Festerling, 2017). As will be mentioned in the “Drawbacks” chapter below, the definition of a SLO has been criticized as vague and inconsistent, which can make it difficult to operationalize and measure. There are also disagreements about its added value beyond concepts like CSR, sustainable development, and stakeholder engagement.

### 3.2 Need for a SLO

There is a consensus within the literature that new tools and concepts are needed to address increasing conflict associated with land use on the local level. The articles we reviewed offer a variety of motivations for why actors may engage in the idea of a SLO, while also highlighting the fact that actors' motivation for engaging differs.

Poelzer et al (2020) see it as a complement to existing legal frameworks, suggesting that a SLO is a tool and indicator to address issues and deficiencies in existing institutional decision-making frameworks. Several articles point to a shifting governance landscape that is emphasizing the role of local communities over regulatory approval. For example, Prno et al (2012) suggest that local communities have emerged as important governance actors that now demand a greater share of benefits and increased involvement in decision making. The authors see this as a shift in power from government authority toward non-state actors.

Other authors take a company perspective and discuss how it may benefit their operations or production. For example, Eerola (2022) notes that corporate conduct matters, and that poor conduct can lead to costly dispute-



resolution processes that are best avoided. Hall and Jeanneret (2015) suggest that a SLO could be motivated because it provides industry with a positive risk mitigation strategy. Parsons et al (2014) take an even more company-centric (and perhaps cynical) perspective, suggesting that a SLO may serve to minimize regulatory impositions, marginalize dissent, and manage reputation. Moffat et al (2016) suggest that it may even be mis-used by different groups with different objectives.

As such, the concept can be viewed as beneficial for a variety of groups but, not surprisingly, these groups see different promises in applying the concept. The 25 articles we reviewed indicate that most researchers see the concept as primarily benefiting large scale development (e.g., mining, wind power, and other industries), but some authors note direct benefits for local communities such as offering a forum and process to meet their needs and demands (see e.g., Parson et al 2014). Other authors saw indirect benefits for local communities by offering a mechanism to create a positive and long-lasting relationship with a company (Prno and Slocombe 2014), or a mechanism to incentivize socially acceptable conduct by businesses.

Although the concept arose originally in the mining industry to handle unique operational challenges related to exploration for minerals (which is more controversial than the production process itself), several studies have noted that the concept has been applied to other sectors or actors, including e.g., NGOs, governments, consultants, pulp and paper sector, agriculture sector and alternative energy sources (Moffat and Airong 2014). As noted, our focus is on minerals and wind energy.

### 3.3 Factors that contribute to obtaining a SLO

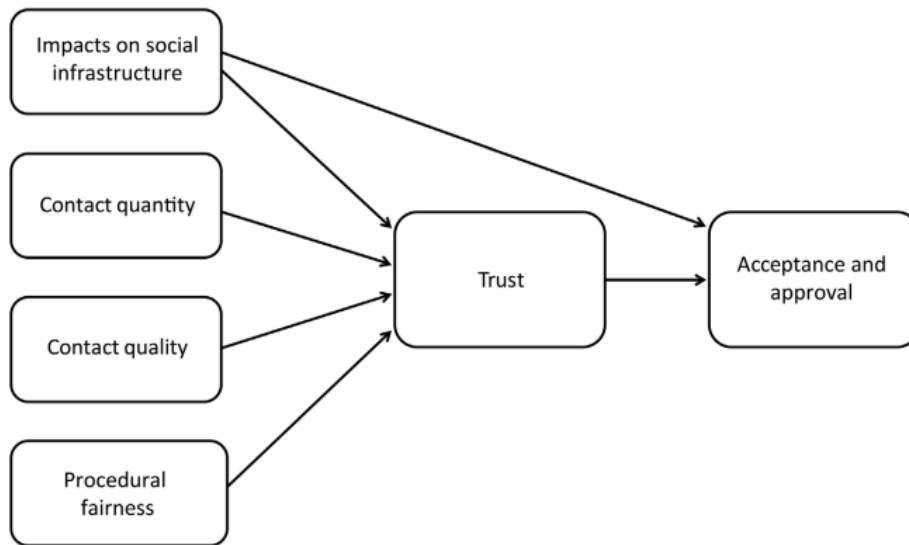
Our literature review suggests that the process for obtaining a SLO can contribute to mitigating land use conflicts. A large part of the literature focuses on identifying factors that in this process play a significant role – either positive or negative. There is relatively strong agreement in the literature about factors that are most important, which we summarize below.

**Trust.** Building trust is critical and the literature points out that trust is a function of many factors. For example, (Moffat 2014) point out that a community’s acceptance of mining companies depends on “mining



operation's negative impacts on social infrastructure, community members' perceived contact quality (not quantity), and procedural fairness in dealing with company personnel (fair treatment and high-quality engagement of mining companies with communities).” The author notes that “perception of impacts” was the weakest factor affecting trust. See Figure 1.

Figure 1: Overview of relationships between concepts (Moffat, 2014).



Moffat 2014 finds that high quality contact is more important than spending a lot of money “mitigating” negative impacts (e.g., providing affordable housing, fixing local infrastructure, ensuring local employment, social investments, etc.). Genuinely acknowledging the experiences as community stakeholders and including them in decision-making processes seems to be more important.

Obtaining trust requires procedural fairness or perceived process legitimacy. According to MacPhail et al (2015) procedural fairness has four important elements: 1) access to information; 2) access to meaningful participation in decision making; 3) lack of bias on the part of decision makers; and 4) access to a legal process for achieving redress (Sovacool and Dworkin, 2015).

**Active early engagement.** A factor that was noticed early in the literature is the importance of early, ongoing communication, including transparent disclosure of information; development of conflict resolution mechanisms; and culturally appropriate decision-making (Prno & Scott, 2012, Ihlen &



Raknes, 2020). The active engagement should involve key arbiters in the process, which naturally includes the local communities due to their proximity to the project, their sensitivity to project impacts, and their ability to affect project outcomes (Prno, et al., 2014).

Many studies emphasize the need to introduce the SLO process - including key SLO factors for success - early in the process. Barakos & Mischo (2021) argue for including a SLO early to identify mining techniques that may be accepted by the local stakeholders.

**Local adaptation.** A successful SLO process should meet community demands, which may vary across space and groups. In particular, studies have emphasized the extent to which the public perceives tangible benefits and perceives the operation itself as being sustainable, to be critical for long term success (Prno, 2013).

But there appears to be consensus that local adaptation is required as different stakeholders and communities differ in terms of culture, values and priorities. Even within communities there may be differences in terms of key demands that should be placed on the developer. For some communities (or subgroups) priorities may differ with respect to key demands such as employment and economic dividends, access to nature and leisure activities, indigenous rights, culture and livelihood, etc.

Prno et al., 2014) suggests that each mineral development is unique and efforts should be made to identify the specific variables and processes that are material in each case. Bice (2014) on the other hand, suggests that companies may sometimes link (inaccurately) SLO to environmental and employment issues while excluding social issues.

**Free, Prior, and Informed consent (FPIC).** FPIC has emerged globally as an important model for community involvement in land use involving resource development. Broadly, FPIC requires that affected communities agree or grant their consent to projects before it goes ahead. FPIC is primarily the duty of the state. UN declaration on the rights of indigenous people and international labor organization convention 169 calls for states to ensure FPIC (Prno & Scott, 2012).



**Industry-specific factors.** Hall et al. (2015) investigate whether key factors that contribute to obtaining a SLO differ between industries. They conclude that most indicators are common between industries such as the importance of listening, engaging, and participating, but they also found some differences. For wind energy operations, local economic gains and ownership (including environmental ownership) was critical. For geothermal energy operations, a more general conclusion was that the development needed to be perceived as beneficial for the local community.

Cesar & Jhony (2021) argue that it is important to acknowledge that different types of acceptance are necessary for SLO to be granted: socio-political acceptance, community acceptance, as well as market acceptance.

Lindman et al. (2020) have conducted a broad review identifying a gross list of sustainability criteria and potential indicators of relevance for SLO. To identify the indicators that are material for a specific operation, they suggest a method in which the business leaders and stakeholders are asked the same questions to identify common interests as well as where the interests differ and could cause conflict.

**SLO processes for identifying common but also conflicting interests.** There are several frameworks and processes proposed in the literature. Lindman et al (2020) have reviewed indicators of importance within different areas such as environmental sustainability, labour practices, economic aspects etc. They propose a method that involves asking questions based on these indicators to representatives of the company as well as local stakeholders in the community. The purpose is to identify issues where they have common and divergent interests. Indicators that rank high in interest among stakeholders and business are found in the upper right quadrant in Figure 2, while indicators ranked high among stakeholders (but not among representatives from the company) are found in the upper left quadrant: this quadrant represents potential areas of conflict. The inventory forms a starting point for negotiations.



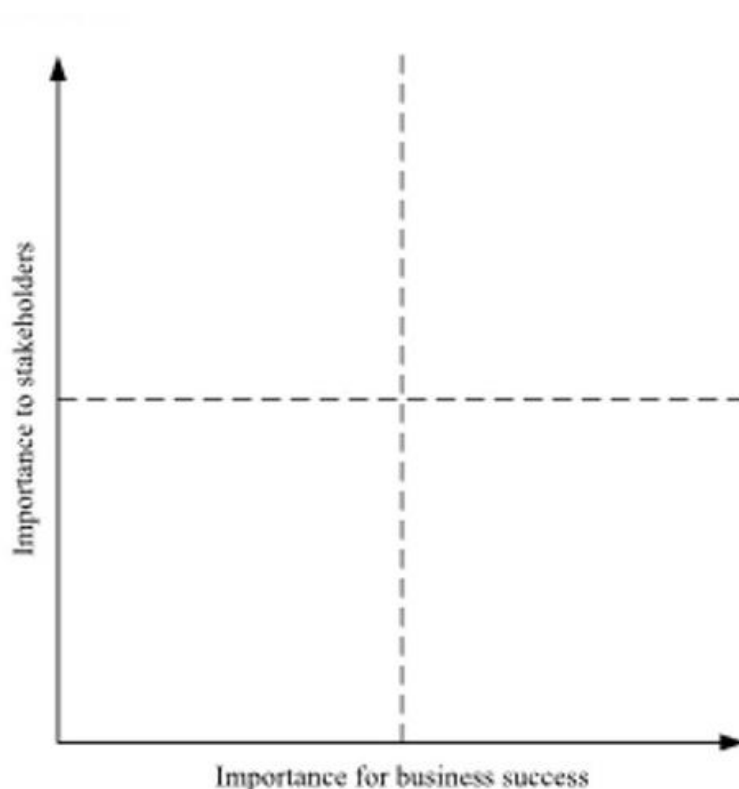


Figure 2: Chart for analysing areas of common interest and potential areas of conflict (Source: Lindman et al 2020).

**Synergies between a SLO and sustainable development.** Most companies work towards and invest in sustainable development goals (see Agenda 2030). Panda & Sangle (2019) analyze the extent to which Sustainable Development and SLO are connected. They find that investing in sustainable development goals has strong synergies with SLO. They suggest that in practice firms should focus on pollution prevention (P2), product stewardship (PS) and Sustainable visions (SV).

Cesar (2021) analyzes how well companies' operations are in coherence with, or linked to, their CSR activities and how this (“CSR-fit”) helps the company earn SLO through pragmatic and moral legitimacy. They conclude that companies should view issues - both their core business and their CSR activities - holistically to earn a SLO.

Vanclay (2019) identifies over 175 actions that could be relevant for companies seeking to obtain a SLO. They discuss how these actions have the potential to escalate or de-escalate conflict, depending on whether the



company engages in appropriate and genuine interaction with stakeholder and/or protesters. Their long list can be categorized into 12 key principles that companies and other organizations should use to guide their actions and help to obtain a SLO (in addition to observing local laws and complying with appropriate international standards). The 12 principles are:

1. Hire qualified staff for community relations
2. Implement meaningful stakeholder engagement processes
3. Be fair, act in good faith and be transparent, honest, and genuine
4. Treat communities with respect
5. Understand local culture
6. Provide valid justification for the project
7. Be technically competent and ensure avoidance of social and environmental harm
8. Deliver benefits
9. Endeavour to empower communities
10. Be part of the community
11. Act with full transparency and accountability
12. Ensure that the broad community support is gained before proceeding with the project.

**Incompatible values.** Some authors argue that dialogue with representatives from the indigenous population at an early stage can lead to a fruitful exchange (Koivurova et al., 2015). They point to the dialog between LKAB and the Sami reindeer husbandry as a positive example.

Raitio et al. (2020), on the other hand, point to assessments of Sami reindeer herding communities' participation in the permitting process for mines and suggest that there are several weaknesses, including: the a priori assumption by Swedish authorities that reindeer herding and mining can generally co-exist; a lack of a codified duty by the Swedish State to consult the Sami; a narrow scope and the weak status of cumulative impact assessments in Swedish environmental impact assessment legislation and practice; and weak recognition of Sami reindeer herding as a “property right”.

MacPhail et al. (2021) have studied the case of Kallak iron mine in Sweden and a gold-copper mine in Canada. According to their interviews with the reindeer herding community there is a fundamental value-based conflict



about human-nature relations, sustainable development, Sami rights, and visions about the future. Representatives of the reindeer herding community portray mining as an unsustainable business, a shortsighted solution based on a perspective that prioritizes financial investments as well as economic and population growth (Lindahl et al 2018). They further argue that it is not an issue of compensation but of choosing between alternative development pathways. One respondent argued that “I can’t see that economic compensation in any way can be an alternative because reindeer can’t eat money” (MacPhail et al., 2021)

**Long term engagement.** A general conclusion repeated by many authors is the importance of SLO being an ongoing process with no explicit end date. As such SLO can be seen as a relationship that requires continuous dialog and is influenced by external factors to which it has to respond.

**Factors that may prevent the obtainment of a SLO.** Some studies identify factors that prevent actors from reaching agreement through a SLO.

MacPhail et al. (2022) focus on why mines fail based on a framework consisting of three concepts: process legitimacy, distributional outcomes and values compatibility. They draw the conclusion that achieving a SLO depends mainly on values compatibility. Process legitimacy and distributional outcomes are, however, also important. So, even if the article focuses on why mines fail to achieve a SLO, it also identifies a number of the same factors that the literature finds generally for achieving a SLO.

Eerola (2022) finds factors that can make it difficult to achieve a SLO are the company being of foreign origin (resource nationalism) and poor corporate conduct (e.g., lack of communication and stakeholder engagement).

In the evaluation of the case of Norra Kärr in Sweden, Barako and Mischo (2021) draw the conclusion that a SLO was not achieved because key SLO aspects were not included in the process at an early stage. The result was that the company made design decisions that prevented both an agreement in terms of a SLO and the legal license itself.

### 3.4 Drawbacks to the SLO concept



In a paper by Santiago et al. (2021), the authors analyze the evolution of the concept of Social License to Operate (SLO) over time. They identified five stages in this evolution. The first stage that set the historical basis spanned from 1996 to 2002. During the second stage “SLO Recognition” (2003-2006) the concept gained wider recognition. The third stage “First Management Models” (2007-2011) was characterized by the development of the first management models for SLO. During the fourth stage “Evolution of the SLO Models” (2012-2016), the SLO model began to evolve, and some initial critical studies were conducted. Finally, during the fifth stage, “Critical Studies and increasing complexity” (2017-2019) a number of studies critical of the SLO concept increased, and the concept became more complex.

We also notice a similar evolving pattern of criticism against the SLO concept during the period covered by this review (2012- 2022). The early literature is mainly critical of the concept as vague and difficult to define and operationalize (Bice, 2014). Although later research also criticizes the concept, the nature of the criticism evolves and focuses on e.g., paternalism of companies, companies having a reductionist view of the population, asymmetric power relationships, and how a SLO can contribute to the silencing of risks to communities and gender issues (women have a different perception of risks, procedural fairness, and economic benefits different from men).

We summarize below several drawbacks to be aware of when applying a SLO.

**Conceptual and practical vagueness.** Bice (2014) lists several problems with the SLO concept, first and foremost being its conceptual vagueness. Companies using scattered definitions of SLO make it difficult to operationalize. Further, its vagueness makes it unclear when/if a company has actually earned a license.

A related problem is that SLO is difficult to measure – which is an oft-cited criticism (Bice 2014). SLO is, according to Cesar & Jhony (2021), notoriously difficult to measure due to its fleetingness. According to Francis et al (2013), Moffat (2014) and Poelzer et al. (2020) a SLO is intangible and unwritten and more linked to a continuum rather than a binary of having or not having a SLO. In practice, companies rarely lack complete approval.



Another criticism is the risk of creating a “pseudo-regulatory discourse”, where firms end up regulating themselves and avoiding hard regulation, where the latter may be more appropriate (Bice, 2014, Parson et al 2014). As opposed to a formal legal license, the SLO is less tangible and cannot be backed up by public institutions.

Moffat et al (2014) also question the added value of a SLO with respect to already existing and/or similar concepts like CSR, sustainable development, and stakeholder engagement.

**Power imbalances and misuse.** A risk that has come to be increasingly noticed is unequal power relations. Even when all stakeholders are explicitly invited into a conversation regarding the nature and shape of future resource development, asymmetric power relations between parties – as well as differences in value sets, worldviews and perspectives – are likely to create risks for mistrust and conflict (Moffat et al. 2016).

Demuijnck & Fasteur (2016) see a risk of companies using the SLO concept in a misleading way, e.g., using numbers/measurement to provide “Proof” that they have a SLO, when in fact this is a matter of debate/disagreement. And it is not something that companies themselves can in fact control (it is up to the public and/or whoever agrees to “sign” the contracts). The only thing companies can do is “consult and dialogue”, i.e., rely on a “process” that aims toward a SLO, rather than a certain means for achieving it. There is a risk that a SLO will be used strategically by businesses, i.e., “managed” by a company to achieve its goals while ignoring vulnerable communities. Specifically, companies may only focus on “licensors” (stakeholders) who actually have the power to “influence the outcome of a companies’ actions,” while ignoring others.

Poelzer et al. (2020) argue that SLOs lack of legislative requirements may allow industry considerable leverage in shaping what constitutes the license (Moffat et al 2016). Decisions can be shaped by local power relations, rather than principles of legal consistency and equity.

Ihlen & Raknes (2020) point to the related concept of “the public interest” being flexible, which in turn may make it vulnerable to capture by powerful organizations who are pursuing their special interests. “Everybody” claims to



be working in the public interest but a lot of studies indicate that only the loudest and most powerful voices are heard (Drutman, 2015; Gilens & Page, 2014).

A further critique that undermines the practical usefulness of the SLO concept is the inherent complexity of the process itself. Although often portrayed as a two-way conflict between a company and a community, the reality is a complex and diverse set of stakeholders with diverging interests, which makes consensus through consultation a difficult undertaking. For example, stakeholder groups may include residents, indigenous people, local/regional/national governments, NGOs, tourist industry, suppliers, etc. Further, there is often a complex and long chain of actor responsibility: e.g., actors that search for minerals, extract them, process them, and add value to them, and ultimately consume them.

**Other drawbacks.** There is also a question of incongruence between the views of local and distant communities, which raises questions about whose voice has the most legitimacy in debate about development projects. This can have potentially large impacts on industry projects (Hall et al, 2015). This also reveals that the relationship between project level and industry level SLO may be more complex than first imagined.

It is common to find the argument that local opposition to projects is based upon NIMBYism, a desire to avoid local costs of a project which may be in the public or national interest (Menegaki and Kaliampakos, 2014). However, environmental justice literature invites us to view this from a different perspective. If the project has significantly affected (or will affect) the ability of local communities to pursue livelihoods, then these areas have become “sacrifice zones” (Hernandez, 2015). This can be seen as environmental injustice or racism, since it marginalizes communities, including indigenous communities that bear the brunt of local costs while the benefits accrue to elites in other spaces. Thus, “distributional injustice” may drive local opposition (MacPhail et al, 2021).

Finally, Prno & Scott (2012) refer to Lynch-Wood and Williamsson (2007) who suggest that the effectiveness of a SLO for small and medium-sized companies is limited, which may explain why these companies rarely embrace it.



### 3.5 Lessons learned through evaluation

One of the questions this review aimed to answer was whether the concept of SLO has been applied and/or evaluated in any practical settings? And more importantly, if so, what can we learn from these empirical studies.

The answer to the first question is yes, there are several case studies assessed in the reviewed articles (Barako and Mischo, 2021, Koivurova et al., 2015, MacPhail et al., 2022). Further, there are lessons learned from empirical studies with respect to how various SLO-strategies and specific factors have contribute to achieving a SLO (or in other cases, explaining why it has not been achieved).

The kind of evaluations performed are, however, not evaluations in which alternative SLO-strategies or individual SLO factors are compared and evaluated based on outcomes. The evaluations are instead qualitative ex-post analyses in which cases are simply compared.

The previously mentioned analysis by Barako and Mischo (2021) is an example of an evaluation that considers outcome. The study considered two cases - one in Norra Kärr, Sweden and one in Bokan Dotson, Canada - and focuses on how the insertion of SLO into the early evaluation of technical and economic aspects of these mining projects affected project design, which in turn affected the SLO. The authors argue that inserting SLO earlier in the process in Norra Kärr would probably have changed the design and led to a higher degree of SLO and potentially a legal license. The authors argue that the early insertion of SLO in Bokan Dotson is a reason for this project achieving both a SLO and a legal license.

Koivurova et al (2015) test if differences in company SLO activities generate different levels of community acceptance. Using eight cases in Norway, Finland, Russia, and Sweden, they find that although the legal-administrative level is well developed in these countries, investing time in the SLO process will become more and more necessary. In all these countries, companies have long since accounted for SLO considerations, but have not always used the term SLO. Further the authors find that developing a SLO is not always a matter of how a company behaves today: in many cases companies with a long presence in a region are often seen as part of a country's legacy and have a higher probability of gaining a SLO.

### 3.6 Policy implications



In the scientific literature policy recommendations are in general scarce (unless the journal is focusing specifically policy). The reviewed articles are no exception and, as such, we did not find any explicit policy recommendations.

There are however ample results of relevance for companies, which have been covered in previous sections, regarding factors of importance for achieving a SLO, as well as factors that may prevent companies from obtaining a SLO. These factors are also lessons for policy and can be regarded as implicit policy recommendations.

Parsons et al (2014) conclude that SLO is important to legitimize mining activity and that it incorporates both local and national dimensions of legitimacy, where the latter is key to policy.

Several of the articles reviewed recommend further research, which could in some cases be seen as policy recommendations, since this implies continued government involvement. Brueckner & Eabrasu, (2018) suggestion the need to “standardize” the concept of SLO and to explore the use of referendum, a simple vote of the local community. Both of these suggestions involve policymaking.

Santiago et al. (2021) suggests further research to shed light on power relations and develop new governance models that can deliver better balance between the needs of a community and the industry. This indicates the need for policymakers to pay attention to power relations in connection with the legal permit process.

The research by Barakos et al. (2021) has policy lessons since the authors emphasise the importance of inserting SLO early in the evaluation of both technical and economic aspects of mining projects to obtain a better basis for decision-making. This is important because an unsuccessful operation will have economic and other consequences not only for the company but also for the local economy, which ultimately makes this of relevance for policymakers.

Many articles address the challenge of achieving a SLO with respect to indigenous people, since their values are often times incompatible with the negative impacts of a mine. Politics has a central role to play here. Conflicts during the establishment phase can be due to unclear policies, as well as unresolved and underlying conflicts. MacPhail et al (2022) highlight the ‘wicked problem’ of irreconcilable differences between project proponents and opponents over what matters, what is to be valued, and what the future should look like. According to MacPhail et al (2022) there is a paradigmatic shift occurring – driven in part by the United Nations Declaration on the





Rights of Indigenous Peoples (UNDRIP) and other initiatives – that means that the private sector is compelled to reframe its concept of a SLO from a community's acceptance of a project to the private sector's acceptance of indigenous people, including their free, prior, and informed consent (FPIC).

Last, but not least, Poelzer et al (2029) and Eerola (2022) argue that SLO activities can play an important role by pushing the state to improve formal regulations or practices. There is a range of issues related to social and economic sustainability that are not, or very weakly, addressed in the Swedish legislation and permitting process: local participation and influence, indigenous rights, economic impacts and redistribution of profits, demography and emigration, gender equality as well as infrastructure and housing. SLO does not offer the ideal arena for negotiating these issues, but it presents an opportunity to raise these kinds of concerns.

In Finland demands by public interest groups (!mining skeptics!) has helped improve the mining permitting process, including the introduction of mining taxes/royalties and an increase in sums guaranteed to ensure safe mine closures (Eerola, 2022).

## 4. DISCUSSION AND CONCLUSIONS

This literature review examined different ways in which a SLO has been studied. Our results suggest that legislation, no matter how well designed, should also be supplemented with a dialogue with groups that are affected on a local level and who, by virtue of living in a particular place, represent its unique nature and culture.

We identified several factors from the literature that are important for achieving a SLO – a literature that we find to be well-studied with a fairly high degree of consensus around the central factors. The drawbacks and risks are also well-documented.

Overall, research offers important and valuable knowledge that can be used to mitigate conflicts. We emphasize that a SLO is goal-oriented (it aims to obtain an actual outcome in the form of an explicit agreement between parties), as opposed to other measures such as CSR or ESG, which focus on certain activities and processes that companies should follow, without specifying an end-result. But the SLO process does not 'finish' at this



outcome either. Instead, a SLO must be maintained over time and the sought-after agreement (outcome) is only possible if the parties are willing to commit to the long haul, despite a potentially costly and time-consuming process. Even if the factors identified as key for achieving a SLO are likely to improve dialogue, cooperation, and trust, there is no guarantee for a SLO at the end of the process. Sometimes the conditions in terms of geography, competing land use and underlying values, ensure that company operations are simply incompatible with other social goals.

Some cases are particularly difficult and there is a need to study complexities involving multiple supply chains. A good recent example is the proposed exploration of a lithium mine in Portugal, which is being driven by both a British mining company and a Swedish company that will process the material and produce batteries.<sup>3</sup> In practice, it becomes difficult to determine which actors within the value chain should be responsible for initiating and maintaining a SLO. Further, what happens if one takes the process seriously, but the others do not? What role or responsibility do the final consumers have in the process?

The fact that a SLO can be two things at the same time – a valuable contribution but also ‘old wine in a new bottle’ – is consistent with some of the inherent contradictions of the concept itself. For example, a SLO is simultaneously goal-oriented (it aims to obtain a license indicating acceptance) and process-oriented (it offers a means toward acceptance, which is arguably more important than the end itself). Thus, the pathway to a SLO can be seen as a continuous striving toward a goal (where indicators connected to CSR or ESG may help measure progress during the journey), rather than a step-by-step process that leads to the issuance of ‘a license.’ This is not surprising given that the goal of obtaining and maintaining trust is perpetual, and therefore costly: once companies or organizations stop trying to obtain it, they end up losing the benefits of the process itself (and may even lose the confidence of the political decision-makers that ultimately decide the fate of these types of land use decisions).

As noted in Chapter 3.2, the SLO literature itself has evolved over time from a simple recognition of the concept to increased acceptance and a more complex critique that focused on “how to apply it in practice.” This evolution is in fact recognizable and parallel with the introduction of the “sustainability” concept, which also followed a trajectory from simple definitions and critique to a more sophisticated phase that focused on measuring, operationalizing,

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<sup>3</sup> <https://www.dn.se/varlden/europas-storsta-litiumfynd-glader-batteriforetagen-och-oroar-byborna/>



and applying it. Many studies emphasize the importance of an SLO in terms of corporate conduct, risk mitigation, and reputation management. Further, the fact that the concept originates from the mining industry itself gives way to speculation: is the concept widely beneficial for all actors involved or is its intention to benefit industry actors by undermining regulatory action and marginalizing dissent?

Our review identified only a limited number of empirical studies that analyzed the actual outcomes associated with applying a SLO process. Methodologically, it is very difficult to evaluate SLO, since every situation is unique (which underscores the fact that legislation alone is insufficient). Each development takes place in a new unique location and developers must consider those affected based on their perspectives and demands.

Our analysis was limited to 25 peer-reviewed and highly cited articles within the last 10 years, many of which were (co-)written by the same scholars. As such, the analysis and conclusions are based on the interpretations of a relatively small number of (well-cited and prolific) academics (it is worth noting, however, that our literature sample captured several critical and contrary perspectives). Our analysis was limited to the study of energy and mineral land use conflicts in the context of a SLO, which means we miss lessons learned from the application of a SLO to the other context to which it has been applied and studied in the academic literature (e.g., other sectors, governments, not-for-profit driven companies, and other organizations). Finally, we focused predominantly on industrialized countries, even though a SLO approach also has been used in the mining and wind power in developing countries.

In short, the process proposed by a SLO would seem to be *necessary but not sufficient*: all actors in a democratic society should engage in this type of process - whether it's referred to as an SLO or not - regardless of the outcome. But success is elusive in land use conflicts involving minerals and energy development, which are often referred to as wicked or intractable problems - i.e., challenges that do not lend themselves to patented or simple solutions. The establishment of these sites have an inevitable impact on society and nature, which bring unresolved and underlying problems to life, including the rights of indigenous peoples, questions about whose interests should be prioritized, trade-offs between short-term gains and long-term values, etc. The solution therefore lies not only in a well-designed SLO-process, but also in the ability of politicians to take a stand on the issues and aim for proactive decisions.



## 4.1 Implications for the research project “Sustainable Industries“

This literature review report was developed to provide support to the ongoing research project “Sustainable Industries,” which also includes interviews with relevant stakeholders and detailed case studies. Based on our conclusions we identify several implications for the research project, including:

- The SLO literature offers guidance for the on-going “green transition” in Sweden and elsewhere, given industry’s stated goal of contributing to sustainable development, including the social, ecological and economic aspects.
- The SLO process should consider lessons learned with respect to e.g., key success factors as well as challenges and complicating factors for achieving and maintaining a SLO. A key success factor is the ability to develop trust between actors, which is a delicate and time-consuming process.
- The process of achieving a SLO needs to be initiated as early as possible in the decision-making process.
- Maintaining the desired outcome requires continual maintenance over time and is particularly vulnerable to missteps. A hard-earned license can evaporate quickly if actors fail to budget the time necessary for maintaining the key relationships.
- The central, regional and local governments, the company(ies), as well as local community stakeholders all play important roles for the outcome and need to be involved in the SLO process itself.
- Most importantly, the SLO-process can help identify weaknesses in the existing legal permitting process that need to be addressed.

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