materials proceedings

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Proceeding Paper

Preliminary Assessment of Social License to Operate (SLO) and Corporate Communication in Four European Lithium Projects †

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† Presented at the 2nd International Conference on Raw Materials and Circular Economy "RawMat2023", Athens, Greece, 28 August–02 September 2023.

Abstract: Lithium, that is now exclusively produced outside the European Union (EU), is needed urgently for the green energy transition. The EU has promising lithium projects; however, the social license to operate (SLO) is important for their long-term viability. In this paper, four lithium projects are preliminary assessed using data from the literature and media regarding their SLO. The projects that aim for hard rock lithium production are (i) the Rapasaari project owned by Sibanye-Stillwater Keliber Oy in Kaustinen, western Finland, (ii) the Mina do Barroso project, owned by Savannah Resources, in northern Portugal, (iii) the St. Austell project, owned by Cornish Lithium plc, in Cornwall, UK, and (iv) the Emili project, owned by Imerys, in Beauvoir (Allier) in western France. The respective corporate websites were searched, regarding their languages while the companies' SLO approaches and strategies were also analyzed.

Keywords: lithium; Rapasaari and Syväjärvi; Mina do Barroso; St. Austell; Beauvoir; energy transition

Citation: Eerola, T.; Komnitsas, K. Preliminary Assessment of Social License to Operate (SLO) and Corporate Communication in Four European Lithium Projects. *Mater. Proc.* **2023**, *15*, 35. https://doi.org/10.3390/materproc2023015035

Academic Editors: Antonios Peppas, Christos Roumpos, Charalampos Vasilatos and Anthimos Xenidis

Published: 6 November 2023

1. Introduction

Lithium (Li) is a strategic metal with excellent physical and chemical properties. Its demand is anticipated to sharply increase in the following years for the manufacture of Li-ion batteries and other energy-storage devices required for the green energy transition. The main deposit types of Li are *brine* deposits with about 0.1% Li_2O grade and hard-rock deposits with Li_2O grade of 0.6 to 1.0% [1].

The social license to operate (SLO) is an informal social contract that was first developed in the 1990s to bridge the expectations of the mining industry and society [2]. SLO indicates the approval of mining activities by the local community or, more widely, by the society, and incorporates the principles of the Global Mining Initiative (GMI); it aims to enhance the role of the mining industry to reach the objectives of sustainable development [3–6].

This study focuses on a preliminary assessment of the SLO for four mining projects in Europe: Kaustinen in Finland, Mina do Barroso in Portugal, St. Austell in the UK, and Emili (Beauvoir mine) in France. This assessment may be useful as the project owners are applying for permits and/or starting mine planning and development as well as construction works. It is important to detect any latent or visible issues and controversies early on, at the stage where most of the mining-related disputes occur [7,8]. Even though it is challenging to identify when a project has acquired an SLO, its loss is clearly indicated by protests, appeals, petitions, and disputes, which can happen suddenly [2]. Therefore, potential controversies or other issues need to be identified and resolved in order to build and maintain trust and dialogue between the diverse local stakeholders. This is essential for a good company–community relationship and may also influence the viability of a project.

2. Methodology

This preliminary assessment of the SLO in four selected European case studies involves an online media and literature search by applying a protest event analysis (PEA) [9]. PEA has been used to identify and map natural resource conflicts [10–12]. It is based on an online media report survey. Contentious movements need publicity for their protests and issues. They become visible through the media, while online media reports are available and accessible sources of information. Therefore, online media reports for the projects and companies were searched to detect any related disputes. In this case, a simple Google query was used. Google Scholar was also used to search for disputes in the academic literature. The keywords were "the project and company names, conflict, dispute, lithium, and mine" in all respective languages. Ten Google pages were surveyed regarding media reports for each project during May-June 2023. Any online media report or journal article on any dispute was considered as an indicator for a controversial situation. The articles were read, and those dealing with any kind of dispute were more closely examined about their situation, importance, specific issues, actors, and history. PEA is a very cost-effective methodology, especially for remote reconnaissance of a situation of disputes, even over vast geographical areas [10–13]. The results are reported in the following section.

Corporate websites were also surveyed to identify policies, strategies, and practices used by the companies to engage the local communities. The languages used in each website were also considered. The online study of those issues was based on the methodology used by Eerola [14].

3. SLO Related Aspects for Four European Li Projects

The following four premier European pegmatite and rare metal granite (RMG) case studies are studied in the frame of the EXCEED project. Keliber Oy owns the LCT-pegmatite deposits Rapasaari and Syväjärvi as well as the smaller ones of Länttä and Outovesi in Finland. The ore reserves, including proven and probable reserves, are 1750, 1480, 101, and 250 kt, respectively, while the Li_2O grade in each reserve is 1.19, 1.09, 0.93, and 1.2%, respectively. Keliber Oy aims to produce 90% battery grade Li carbonate (min. 99.5% Li_2CO_3) and 10% high-purity Li carbonate (min. 99.9% Li_2CO_3). Li_2CO_3 will be produced from a spodumene flotation concentrate containing 4.5% Li_2O [15].

Even though the Rapasaari deposit is located close to a Natura 2000 area, the Siboney Stillwater Keliber's Li projects have been positively viewed by the media, and the available articles highlight economic and industrial perspectives. However, concerns about environmental impact of mining have been raised by local environmental, landowner and fishing associations in the form of appeals to Administrative Court of Vaasa on the concession of water and environmental permits of the Syväjärvi mine [16]. The appeals were rejected, but the company was determined to efficiency improve its water quality monitoring campaign [17].

According to Eerola [14], Keliber was among the 20 out of 73 companies surveyed that operate in Finland and mention SLO-related issues on their websites. Keliber Oy used a Sustainability Excellence System (SES), adapted from the Global Reporting Initiative (GRI). SES is promoted by "open dialogue, community involvement and transparency" and is monitored by key performance indicators [18]. Now, the company is mainly owned by the South African Sibanye Stillwater [19]. According to its website, Sibanye-Stillwater's sustainability relies on its iCARES values—"innovation, commitment, accountability, respect, enabling, and safety" [20].

The Mina do Barroso is a high-grade Li project in northern Portugal, owned and developed by the British company Savannah Resources plc. Most of the Li mineralization in the area is related to spodumene-bearing pegmatites. Mina do Barroso was one of the fourteen Li extraction projects worldwide, which were evaluated using multi-criteria decision making (MCDM) models [21]. It is mentioned that this project had difficulties in starting operations due to strong opposition from the local population, because it is a biodiversity hotspot and is known as a World Agricultural Heritage Site; in addition,

it is located within an agricultural area involving cattle ranching [22]. However, the project obtained a positive declaration for its environmental impact assessment from the Portuguese Environmental Agency on 31 May 2023 [23]. Savannah Resources plc recognizes a dispute in its website, which is quite rare for the mining industry; the company presents its stakeholder engagement and benefit-sharing plans and practices, while numerous factsheets on several related topics can be also found in the Portuguese language [24].

The St. Austell, Cornwall, UK, rare-metal granite project is composed of six major granite types and is a world-class kaolin deposit formed from the weathering and alteration of the underlying granite. The Trelavour (TreLit) project is owned by British Cornish Lithium plc. Kaolin is used in the paper, ceramics, paint, and rubber industries, while kaolinite has been mined from St. Austell for a period longer than two centuries. As a result of the kaolinization process, some metal-bearing accessory minerals including monazite or cassiterite are liberated from the gangue, while the micaceous residue is considered as a potential source for CRMs. It is also intended to extract Li from thermal waters. St. Austell is in an old mining heritage area, and the TreLit is in the exploration stage [25]. No articles on any disputes or controversies are traced regarding the TreLit project. In fact, the articles are quite positive and reflect economic and industrial views. In its corporate website, the Cornish Lithium Ltd. [26] affirms that it cultivates a good relationship with the local community and engages with it by participating and hosting events that emphasize project updates. In its 2021 sustainability report, the company affirms that its commitment for high environmental and social governance (ESG) standards is "central to maintaining our social license to operate, creating value for all stakeholders and ensuring commercial success" [27].

The Colettes massif in the Echassières district (Allier region, France) hosts several types of rare-metal mineralizations, including the Beauvoir rare-element (Li–Ta–Nb–Be–Sn) granite, which is composed of albite, lepidolite, and quartz with subordinate amounts of K-feldspar [28]. Geochemically, it is a highly specialized, strongly peraluminous RMG. Detailed spot analyses of mica from samples obtained from eight RMG plutons of different geochemical affiliations, including Beauvoir, to assess the content of major and minor including Li and trace elements can be found in Breiter et al. [25].

The Emili project started in 2018; however, kaolin has been extracted in the region for decades. No evidence regarding existing disputes in the area was detected. Imerys [29] communicates that it practices stakeholder engagement and dialogue with the local communities.

The characteristics of the projects are summarized in Table 1.

Table 1. Characteristics of four European lithium projects.

Project	Country	Project Owner	Lithium Source	Project Stage	Mining History	Website Language	Dispute
Emili	France	Imerys	Granite	Exploration	Kaolin extraction	French, English	No
Kaustinen	Finland	Siboney Stillwater Keliber	Pegmatite	Exploration	No mining heritage	Finnish, English	No, but appeals have been made
Mina do Barroso	Portugal	Savannah Resources plc	Pegmatite	Exploration	Tungsten mining	Portuguese, English	Yes
St. Austell	UK	Cornish Lithium plc	Granite, thermal waters	Exploration	Kaolin extraction	English	No

4. Conclusions

Four European Li mining projects, namely Mina do Barroso in Portugal, Kaustinen in Finland, St. Austell in UK, and Emili in France, were preliminary evaluated regarding their SLO and online communication of related topics. Based on this assessment, only the Mina do Barroso project has faced strong opposition. It is also the only one for which journal and other academic papers discussing the disputes were published. So far, by

taking into consideration positive media coverage, it is deduced that all the other projects seem to be favored by the local population, as no signs of controversies or disputes have been reported.

The Emili and TreLit projects need to be more closely inspected regarding their associated land uses, while all projects need to be continuously monitored for the development of their company–community relationship. However, the case of Mina do Barroso deserves further examination as a dispute case. Corporate and opposers' discourses, situation on the site, as well as causes and development of the dispute could be interesting topics to be further analyzed in more detail.

Site visits are planned for all projects, and a more comprehensive article on them is in preparation. This will also include a more systematic approach of an online media report survey to be carried out by using Meltwater media monitoring and analysis software on all projects.

Author Contributions: Conceptualization, T.E. and K.K.; methodology, T.E. and K.K.; investigation, T.E. and K.K.; resources, T.E. and K.K.; writing—original draft preparation, T.E. and K.K.; writing—review and editing, T.E. and K.K. All authors have read and agreed to the published version of the manuscript.

Funding: The authors acknowledge the financial support of EXCEED project, 1 January 2023–31 December 2026, which has received funding from the European Union's Framework Programme for Research and Innovation Horizon Europe under Grant Agreement No. 101091543.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: No new data were created or analyzed in this study. Data sharing is not applicable to this article.

Conflicts of Interest: The authors declare no conflict of interest.

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