The Social Licence to Operate (SLO) has emerged as a leading concept to assess the legitimacy of extractive operations. This article examines recent SLO literature to discuss how the SLO is conceptualized and enacted. Our discussion focuses on three main themes: (1) who are considered to be relevant stakeholders; (2) the ways in which these stakeholders are engaged; and (3) how social and environmental impacts of extractive operations are considered. Our analysis points to a tendency in literature to focus on local stakeholders and a failure to consider wider sustainability implications. On the basis of these findings we argue that the evaluation of extractive operations must be based on a comprehensive concept of legitimacy that not only seeks the approval of local stakeholders but also recognises the importance of open-ended political deliberation that addresses global norms of social and environmental sustainability and includes diverse values, needs and interests.

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Current Opinion in Environmental Sustainability 2020, 45:7–11
This review comes from a themed issue on Open issue 2020 – part B section
Edited by Eduardo Brondizio, Ophéa Pauline Dube and William Solecki

Received: 01 July 2020; Accepted: 10 November 2020

https://doi.org/10.1016/j.cosust.2020.11.002
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Introduction
Two decades after Jim Cooney coined the term Social License to Operate (SLO) to describe local risk management, the SLO has become a prominent concept used in corporate as well as academic discourse [1–4]. The SLO concept reflects the increasing recognition of the importance of societal support for extractive operations. Failing to secure a SLO is considered a major corporate risk for many natural resource-based sectors and can lead to protests and litigation [5,6].

Over the last decade, SLO scholarship has focused on assessing how corporations have managed community relations and expectations to generate support [3,7]. A recurring topic in this literature is to analyse to what extent extractive corporations meet specified criteria that are considered important. Authors have identified different criteria for the SLO, including legitimacy, credibility, and trust [2,4,8]. Discussion of how the key components of an SLO are, has led some authors to problematize the conceptual ambiguity of the SLO and its potential to establish legitimacy (e.g. Refs. [9–11]). This also raises the question how the concept is enacted in practice and with what implications [12].

Building on this critical literature, we have identified three main themes. The first main theme is who the relevant stakeholders are; that is, who has to consider extractive operations to be legitimate, credible, and trustworthy? Practices of stakeholder engagement show a tendency to limit the stakeholder concept to communities who live nearby the operation [10,13] and to vocal and organized groups, while non-residents or opponents are excluded or even criminalized [5,14,15]. Second, the way in which engagement is done has been criticized. For example, scholars have noted a lack of inclusiveness [9,13], because engagement is often limited to and focused on the purpose of continuing extractive operations without disruptions or substantial alterations [11,16]. Third, scholars have pointed to a limited scope of the SLO, that is, the SLO focuses mostly on local and social impacts, discarding global and environmental considerations [17,18].

Thus, while the SLO concept has become a prominent term in literature and practice, it also continues to be debated. Not only in terms of how the SLO is and should be conceptualized and defined, but also in terms of the effects it is producing as extractive corporations attempt to secure it. This article discusses recent SLO literature, published between 2018 and 2020 and indexed in either Web of Science or Scopus (see Annex 1 for an explanation of the selection strategy) to explore new directions and trends in the SLO’s conceptualisation as well as its enactment in practice. We focus our discussion on the three main themes identified above: stakeholders, engagement, and impact. We use this discussion to reflect on how
and to what extent the SLO concept contributes to the legitimacy of extractive operations. Based on our findings, we argue that scholarly literature on extractive operations and the SLO needs to broaden its conception of legitimacy beyond local stakeholders’ acceptance [19,20]. Legitimacy should also include the justifiability of operations, that is, the extent to which extractive operations and their social and environmental impacts are seen to be in accordance with formal and informal rules, as well as societal norms and beliefs [11,21]. Using this broader notion of legitimacy is urgently needed to support a fuller evaluation of and critical reflection on the legitimacy of extractive operations.

**Stakeholders**

Securing an SLO involves the attempt to gain support from stakeholders and communities [1,22]. Scholars have shown that corporations tend to prioritize residential or local, vocal, and well-organized citizens and social groups, at the expense of historically marginalized communities and individuals for whom no clearly visible or fair representational structure exist [9,16,23–26]. In addition, non-local stakeholders that are affected by and have an interest in extractive operations, including those related to global sustainability crises, are generally not considered [7*,22,27,28,29*]. This means that the heterogeneity of stakeholders relevant for a SLO is overlooked [7*,9,30,31,32*]. What this suggests is that the SLO literature is based upon a limited conception of who is a relevant stakeholder, what communities are, and whether and how they can be equal negotiation partners [29*,30,33,34**].

In response to these limitations, literature stresses the importance of civil society actors to organize themselves and to strategically employ the SLO for establishing a political space [23,26,30,35**]. SLO scholars note how such self-organized bottom-up processes may help counter dominant understandings of stakeholders, facilitate open discussion about which stakeholders are relevant to include, and offer a platform for deliberating diverse values, including those that deviate from dominant development norms [7*,23,26,30,35**,36,37].

**Engagement**

Studies have criticized companies for having a top-down approach to engagement rather than promoting meaningful two-way conversations with an active, emancipating role for stakeholders [7*,33]. Such top-down approaches are often enabled by the infrastructural and institutional dependencies of local communities on extractive corporations, but they affect the quality and outcomes of engagement, and risk (re)producing uneven power relations and inequalities within and between stakeholder groups [29*].

To address these limitations and power inequalities, recent SLO literature emphasizes alternative conceptualisations of engagement that foreground continuous and equal deliberation and reflection. Social licenses differ from formal legal or political licences because they are not granted with a clear mandate and time-period [13]. Instead, securing an SLO involves open-ended, context-specific and dynamic processes that require long-term engagement strategies [13,24*,33,38]. Such processes aid the recognition of diversity in values and sources of knowledge, post-operational impacts, and allow non-corporate and non-governmental actors to co-design the engagement process [7*,24*,31,33,34**,35**,39*,40].

Governments play a crucial role in enabling deliberative spaces and in preventing corporations from exclusively determining the scope and design of engagement [31,41*,42]. While it has been noted that powerful government-corporation collusions can constrain and deter opposition [24*], it is important to consider such opposition and protest not just as a problem to be prevented or ignored, but as an expression of public values and a sign of important and ignored underlying issues [32*]. The assessment of the legitimacy of extractive operations should focus on the extent to which the SLO involves open-ended engagement approaches that include a more balanced set of values and worldviews.

**Impact**

Extractive operations are often associated with negative social, environmental, cultural, political and economic impacts [7*,43,44]. Yet, empirical research into SLO rarely includes technical details, analyses, or reports. This absence of the actual material dimensions of extractive operations in SLO research is an important insight, since the operational design, qualities, and impacts of projects are often the focus of passionate public disputes [7*,43,44]. From the few studies in our corpus that include this material dimension, only two explicitly relate the SLO to the expected severity and probability of social, economic and environmental impacts at different scales [27,37]. Another suggests that this omission serves to distract actors from considering these impacts [39*]. Thus, while the SLO literature analyses operations’ efforts to reduce unrest through engagement, it paradoxically largely fails to address the actual social and environmental impacts that fuel this unrest in the first place [7*,43].

A way to engage more explicitly with the material impacts of extractive operations is by means of information. There is often an implicit and problematic assumption that stakeholders have the capacity to acquire such information themselves, distill potential impacts from this information, and organize themselves to voice their concerns [9,29*]. In response, scholars have argued that companies should take an active approach by enabling transparent, easily accessible, and reliable information about a wide range of (potential) impacts as a basis for engagement [43,45]. Moreover, this knowledge base needs to be
sufficiently diverse to align with the diverse worldviews and perspectives of stakeholders [45–47]. A co-production strategy that considers a broad range of stakeholders as active contributors to and co-producers of credible and relevant knowledge for assessing risks and importantly, for co-designing operations, is seen as promising for a fair and informed assessment of the legitimacy of extractive operations [20,48]. A second way to increase engagement with material impacts of operations is by connecting the SLO to discussions around the demand and desirability for extracted resources on local, regional, or global scales. This implies connecting the SLO with broadly supported international sustainability targets, such as the Sustainable Development Goals (SDGs) [18,49].

Conclusion
The findings we have presented show that the way in which the SLO is enacted is characterized by a limited conception of stakeholder engagement and by insufficient attention towards the local, regional and global, social and environmental impacts of extractive operations. Multiple biases in the conceptualization and enactment of the SLO hinder meaningful engagement of stakeholders and prevent actual changes in extractive operations [27]. Specifically, we have seen: (1) a tendency to privilege well organized and local communities and groups over marginalized, ‘dissident’ or non-local stakeholders; (2) a concept of engagement that restricts opportunities for two-way dialogue and long-term, equal and meaningful deliberation; and (3) a failure to represent the actual nature and impacts of the operations at stake.

Drawing on the more critical literature that recognizes and reflects on these biases, we suggest to widen the scope of the SLO concept by: (1) including a diversity of local and non-local stakeholders; (2) improving the ability of these stakeholders to actively engage by creating long-term spaces for active and meaningful deliberation and co-production; and (3) enabling the coproduction of knowledge about impacts and risks of extractive operations, and incorporating international sustainability targets. What this comes down to is the creation of spaces for meaningful political deliberation across local-international scales that include diverse stakeholders and involve the co-production of knowledge about the diverse impacts and implications for extractive operations. This requires that extractive sites are connected to wider sustainability issues including pollution and emissions, patterns of production and consumption, and (global) inequality [50,51].

Taken together, these suggestions imply a broader conception of legitimacy that includes not only the acceptance of relevant stakeholders but also the wider justifiability of extractive operations which foregrounds the importance of including diverse values, arguments and knowledge claims in SLO deliberations. This broader concept of legitimacy will require SLO scholarship to go beyond problematic approaches to engagement that primarily focus on acceptance by local stakeholders. These approaches have been criticized in studies of participation beyond the SLO [52–54], including studies that focus on the exclusion of indigenous and traditional communities [55]. Although they remain common in research and practice, they are limited in their scope. Specifically, they prevent the explicit consideration of the wider political economic context in which extractive operations are situated and how this limits the inclusion of the diverse values and interests that are at stake, enables the perpetuation of power inequalities, and prevents the establishment of political spaces for equal and open deliberation about the desirability of extractive operations [20,56].

To conclude, it is important that the SLO literature adopts a broader concept of legitimacy in its assessment and evaluation of extractive operations [11,19,20] and that it engages with other scholarship on participation and engagement, and on the political economy of extractivism. This will contribute to a fuller understanding of how and under what conditions extractive operations may meet local and global requirements for subsistence and human and ecological well-being and it will strengthen the conceptualization, evaluation and enactment of legitimacy in the SLO.

Funding statement
The research leading to this publication has received funding from the European Union’s EU Framework Programme for Research and Innovation Horizon 2020 under Grant Agreement No 776846 (NEMO – https://h2020-nemo.eu), GA No 776473 (CROCODILE – https://h2020-crocodile.eu/) and GA No 821159 (TARANTULA – https://h2020-tarantula.eu/).

Conflict of interest statement
Nothing declared.

Appendix A. Supplementary data
Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.cosust.2020.11.002.

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