



Conceptualising social licence to operate

Alice Stuart^{a,*}, Alan Bond^{a,b}, Aldina M.A. Franco^a, Julia Baker^c, Chris Gerrard^{d,e}, Vittoria Danino^d, Kylie Jones^f

^a School of Environmental Sciences, University of East Anglia, Norwich Research Park, Norwich NR4 7TJ, UK

^b Research Unit for Environmental Sciences and Management, North-West University, South Africa

^c Mott MacDonald, 10 Fleet Place, London, EC4M 7RB, UK

^d Anglian Water Services Ltd, Lancaster House, Lancaster Way, Ermine Business Park, Huntingdon, Cambridgeshire. PE29 6YJ, UK

^e CIEEM, Grosvenor Court, Ampfield Hill, Ampfield, Romsey, SO51 9BD, UK

^f SSEN Distribution, 200 Ashgrove Road West, Aberdeen, AB16 5NY, UK

ARTICLE INFO

Keywords:

Social licence to operate
Corporate social responsibility
Policy
Stakeholder
Trust
Legitimacy

ABSTRACT

In the 25 years since its inception, the concept of social licence to operate (SLO) has become widely used within both industry and academia. Despite this, there is no agreement as to what SLO is and what is required to achieve it. This conceptual ambiguity results in organisations struggling to understand how to achieve SLO and leaves many cynical about its use. Through literature review, this paper brings together existing conceptualisations of social licence to operate, presenting an explanatory model for how individuals form SLO judgements. We highlight four key stages in the formation of an SLO judgement: the assimilation of information by the individual; the formation of perceptions about the project; the application of cognitive processes to these perceptions; and the formation of legitimacy, trust, and overall SLO judgements. Next, we highlight the role of actions as the link between SLO judgements and operational outcomes. We note that where individuals' negative SLO judgements are suppressed, or they lack power over organisations, they will not have an impact on operations, causing an uncoupling of SLO judgements and operational outcomes. This uncoupling can also occur if operations are halted for non-SLO related reasons. This model represents a greater level of detail as to the process by which individuals form SLO judgements than previous conceptualisations, thus providing a clearer understanding of how the components of an SLO interact with each other.

1. Introduction

1.1. What is SLO?

The popularisation of social licence to operate (SLO) as a term is generally attributed to ex-Placer Dome Director of International and Public Affairs, Jim Cooney (Cooney, 2017). In the face of globalisation, mining companies were operating in countries where they faced uncertain reactions and anti-globalisation sentiment (Gjølberg, 2009; Miller, 2014). Further, whereas previously relationships between mines and local communities had largely been 'out of sight of the rest of the world' (Cooney, 2017, p. 198), the communications revolution provided greater opportunity for impacted communities to inflict financial and reputational damage, increasing their potential to have a negative impact on operations (Morrison, 2014). Cooney used the term to highlight the increasing need for industries to go beyond regulatory

requirements imposed by a country to manage and minimise socio-political risk (Cooney, 2017; Edwards et al., 2016).

SLO is widely considered to represent the ongoing acceptance, approval and support from communities and/or stakeholders (Black, 2013; Business for Social Responsibility, 2003; Cleland, 2013; Joyce and Thomson, 2000; Parsons et al., 2014; Thomson and Boutillier, 2011) however, the definition of 'stakeholder' and who should be included in it is still disputed (Boutillier, 2020). Other authors focus on the presence of, and requirement to meet, societal demands and expectations (Business for Social Responsibility, 2003; Gunningham et al., 2004; Howard-Grenville et al., 2008; Thornton et al., 2003) and norms (Harvey, 2011), some of which may be tacit (Howard-Grenville et al., 2008), beyond any legal requirements (Business for Social Responsibility, 2003). Some focus on the procedural aspects, defining SLO as the 'continuous engagement process ... to build trust and obtain legitimacy, leading to dynamic levels of consent or rejection' (Leeuwerik et al., 2021, p. 5).

* Corresponding author.

E-mail address: alice.stuart@uea.ac.uk (A. Stuart).

<https://doi.org/10.1016/j.resourpol.2023.103962>

Received 15 July 2022; Received in revised form 8 February 2023; Accepted 24 July 2023

Available online 15 August 2023

0301-4207/© 2023 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

Alternatively, Salim (2003) presents a rights-based definition of SLO as the right for Indigenous peoples and other impacted groups and individuals to participate in decision making and give free prior and informed consent (FPIC) throughout the project's lifecycle.

Given these potentially contradictory definitions and approaches (Cooney, 2017; Dowd and James, 2014; Hall, 2014), SLO remains a nebulous concept which continues to incite debate on what exactly it is and how it can be measured (Jijelava and Vanclay, 2018; Moffat et al., 2016). The use of the term 'licence' is much disputed as it implies a binary state, where organisations have an SLO handed to them by a single 'community' without which they cannot continue operations (Dare et al., 2014; Parsons and Moffat, 2014). Instead of this, it is widely agreed that SLO is intangible, unwritten and tacit (Bice et al., 2017; Franks and Cohen, 2012; Parsons and Moffat, 2014). Almost all projects have a multiplicity of stakeholders, all of whom are subject to different norms and expectations that must be adhered to in order to garner acceptance (Dare et al., 2014), doing away with the concept of a single licence. Further, feelings about a project can vary in strength, meaning there are different levels to which stakeholders can accept an organisation and/or project ranging from complete absence of SLO to full trust and psychological identification (Boutillier and Thomson, 2011; Thomson and Boutillier, 2011).

SLO has been contextualised as one of three 'licences' required for an organisation to operate: the SLO, the legal licence to operate (LLO), and the political licence to operate (PLO) (e.g. Bice et al., 2017; Morrison, 2014). Unless they wish to be criminalised, organisations must follow all regulations and laws related to their activities, thus fulfilling their LLO (Boutillier, 2020; Brueckner et al., 2014; Leeuwierik et al., 2021; Morrison, 2014). The PLO represents the need for governmental and political approval for organisations to undertake activities (Brueckner et al., 2014; Morrison, 2014) 'based on its contribution to the state's development agenda' (Brueckner et al., 2014, p. 315). The PLO and LLO are outside the scope of this paper, however it is recognised that they are critical for an organisation to operate in any specific context and represent important contextual background for the SLO.

This paper will use Thomson and Boutillier's (2011) early and influential definition of SLO: 'the level of approval that an industry, organisation, or project realises from its stakeholders' as it remains general enough to encompass many of these diverse understandings of SLO.

1.2. Why does SLO matter?

Many organisations create negative environmental and social externalities (e.g. Parsons et al., 2014; Shaw, 1992) and are therefore seen as acting out of place (Gjølberg, 2009; Miller, 2014). Failing to address issues that matter to stakeholders can lead to protest (Jijelava and Vanclay, 2017), which can incur substantial costs and cause reputational damage (Franks et al., 2014). Protest can take many forms, and has a wide range of potential impacts (Hanna et al., 2016). These impacts can occur to both the organisation and the project itself (Franks et al., 2014; Vanclay et al., 2015), and may spill over to other organisations in the industry, for example through making more stringent regulations politically expedient (Jijelava and Vanclay, 2017). Stakeholders have a genuine power to impact, and in some cases entirely halt, operations (Edwards and Lacey, 2014; Jijelava and Vanclay, 2018; Miller, 2014; Syn, 2014) representing the sociological reality underpinning the need for SLO (Miller, 2014).

To manage and mitigate the risk associated with poor stakeholder relations, organisations, particularly those in the extractive industries, have begun adopting SLO as a business imperative (Cooney, 2017; Miller, 2014). This represents a heightened awareness of maintaining good community relations to manage socio-political risk associated with stakeholder opposition, thereby reducing the impact on operations (Hall, 2014; Jijelava and Vanclay, 2014; Miller, 2014). In some cases, to claim positive SLO, organisations conceptualise SLO at a level easier to

control by restricting issues to a local level, minimising regulatory impositions, marginalising dissent and managing their reputation (Parsons et al., 2014). This approach is often accompanied by a lack of acknowledgement of stakeholders' ability to withdraw SLO (Dowd and James, 2014; Parsons and Moffat, 2014) and ultimately acts to reduce the influence of communities on operations (Parsons and Moffat, 2014).

Treating SLO solely as a business practice or sociological reality does not reflect the actual needs and demands of the impacted stakeholders, with little clarity as to whether SLO requires any more than avoiding inciting sufficient opposition to halt operations (Miller, 2014; Syn, 2014). Thus, in these cases SLO depends less on stakeholder opinions and more on the willingness and capacity of stakeholders to act in a way that halts operations (Syn, 2014). Stakeholders often lack the power required to halt operations, meaning that even if they reject a project, there may be negligible impacts on the project or company (Syn, 2014; Wilson, 2016). Under this approach, communities that are poor, marginalised, weak, divided or disempowered in some other way are left unable to withdraw SLO and at risk of suffering from industrial bad practices (Miller, 2014; Wilson, 2016).

To address this, many authors have highlighted the importance of concepts such as free, prior and informed consent in SLO (Bice et al., 2017; de Jong and Humphreys, 2016; Koivurova et al., 2015; Morrison, 2014; Taylor and Mahlangu, 2017), acknowledging 'the right of communities to grant and/or withdraw their permission for businesses or other organisations to locate and undertake activities within their jurisdiction' (Miller, 2014, p. 388). This approach sees SLO as an evolving form of governance (Miller, 2014), promoting communities' human right to self-determination (Vanclay, 2017) and addressing calls to move away from industry definitions of SLO designed to allow continued operation (Syn, 2014). It also promotes the consideration of social risk, the potential negative impacts and perceived threats faced by the community itself when dealing with SLO (Bice et al., 2017), as opposed to focussing on the risks to the organisation.

Thus, the importance of SLO is in the explicit recognition and consideration of the financial, reputational and community risks associated with failing to meet stakeholder needs and expectations.

1.3. How is SLO achieved?

Understanding how SLO is gained is essential for the management of risk, and planning of associated monitoring within organisations genuinely looking to acquire and maintain an SLO (e.g. Boutillier and Thomson, 2011) while avoiding claims of green-washing (Hamann and Kapelus, 2004; Vanclay, 2017). Further, understanding how SLO is gained reduces the ability of organisations to legitimise controversial actions through claiming SLO without justification (Bice, 2014; Gehman et al., 2017; Owen and Kemp, 2013; Parsons and Moffat, 2014). Therefore, there is a pressing need to understand how to gain an SLO.

Many conceptual questions remain, hindering our understanding of how SLO is gained. One set of questions queries which stakeholders need to accept a project for it to legitimately claim to have SLO (Boutillier, 2014; Brueckner and Eabrasu, 2018). Along these lines, Wüstenhagen et al. (2007) developed a triangle model detailing the three types of acceptance: Sociopolitical (acceptance of ideas and technologies by stakeholders); Community (acceptance by local stakeholders); and Market (acceptance and perpetuation by the market). However, separation of SLO by stakeholder group leads to questions over how to weight differing stakeholder opinions in the case of conflict (Boutillier, 2014, 2020). Further, the extent of consensus required within and between stakeholders is still uncertain (Boutillier, 2014; Jijelava and Vanclay, 2014; Wilburn and Wilburn, 2011).

Given this lack of consensus on who constitutes a stakeholder, for the purpose of our research we will propose a new definition for stakeholder within SLO: "a person, group, or organisation with a stake (interest) in the subject activity, whose interest is not solely political or legal in nature". This draws on the generic definition presented by McGrath and

Whitty (2017) adapted to include only those who can make a judgement on the acceptability of a project or organisation (i.e. a person, group, or organisation) and exclude those whose interest is solely political or legal in nature to accommodate for the separation between SLO, political licence to operate, and legal licence to operate (Bice et al., 2017; Morrison, 2014). This paper will focus on the individual level as decision-making and change is influenced heavily by the actions of individual change agents (Munduate and Bennebroek Gravenhorst, 2003). We recognise this does not address the dynamics between individuals and power disparities that occur to form organisational or group judgements, however we argue it is a necessary first step in understanding the process of SLO formation.

There are also questions around elements required to achieve SLO. There are multiple overlapping and, in cases, conflicting conceptualisations of SLO (e.g. Bice et al., 2017; Boutilier and Thomson, 2011; Leeuwerik et al., 2021; Moffat and Zhang, 2014; Parsons and Moffat, 2014; Prno and Slocombe, 2014; Thomson and Boutilier, 2011). Methods of measuring SLO have been developed (e.g. Boutilier and Thomson, 2011; Moffat and Zhang, 2014; Richert et al., 2015), however each relates to a particular conceptualisation, meaning they may be missing important elements and understanding. Explanatory models of SLO have been produced, such as the Narratives and Networks model in Boutilier (2020), which depicts the formation of an SLO as a process of 'socio-political churn'. These questions underpin the primary aim of this paper set out in the next subsection.

1.4. Objectives and structure

This paper aims to identify and draw together existing conceptualisations of SLO into an over-arching meta-conceptualisation. This will help to draw together disparate conceptualisations into a holistic and internally consistent framework. To do this, we will first extract the main components of SLO from the existing literature. We will then use existing conceptualisations of legitimacy and trust formation to develop a model of the process of arriving at an SLO judgement for an individual stakeholder, and the impacts of this on SLO outcomes. This model will form the basis of future empirical investigations around how SLO is gained.

2. Our approach

To address this aim the following two questions are asked.

1. What are the key components in a comprehensive descriptive conceptual framework for an individual's social licence to operate judgement formation?
2. How do these components fit together?

Answering these questions will allow the creation of a conceptualisation structured around the components and sub-components involved in determining SLO. To do this, the existing literature, drawn primarily from peer-reviewed journals with some use of books and reports, is reviewed. As the literature is large and rapidly expanding (Santiago et al., 2021) this review does not represent an exhaustive coverage of the literature, rather it focuses on literature presenting novel conceptualisations of SLO.

Following Jabareen (2009), the first step in creating a conceptual framework is to find the relevant literature. To do this, Scopus was searched on March 25, 2022 using the terms:

```
TITLE(("social licence" OR "social license")) AND TITLE-ABS-KEY
((conceptuali* OR framework OR model) AND (present* OR propose* OR introduc* OR novel OR new OR overarching OR combine*))
```

This search returned 55 results covering a period from 2007 to 2022 (with all results shown in supplementary data Table S1). Four papers

were removed in the first pass (one duplicate, two papers where full text was inaccessible, and one non-English language paper) leaving 51 results. The abstracts and titles were then manually filtered to assess whether they presented a novel conceptualisation of SLO, determined by whether they contained components or relationships absent in previous conceptualisations, leaving 30 sources. Five key conceptualisations referenced within the results that had not been returned in the Scopus search and two papers suggested by reviewers were also added (supplementary data Table S2), although we recognise that this search strategy may have excluded relevant papers.

Next, each paper was read, and all components included in the papers' conceptualisation of SLO were identified and categorised (supplementary data Table S3). These components were then deconstructed into their basic ideas, categorised by type and, where appropriate, combined to reduce the total number of components and simplified into a holistic and internally consistent framework. These were then combined with existing conceptualisations of legitimacy and trust, as these components dominated the existing conceptualisations identified, to produce an explanatory model of SLO. Finally, methods of improving SLO present within these papers were collected and categorised.

3. Results and discussion

Fig. 1 sets out the culmination of the method and models the process leading to individual SLO judgement formation and its influence on organisational outcomes. The following text will explain how the process of establishing an SLO develops, albeit the many interrelationships mean the process is unlikely to be linear. The relationships between components within the meta-conceptualisation have each been given a letter, used in the text below to explain the nature of each relationship.

3.1. Sources of information

As SLO is determined by stakeholders, it is built from individual perceptions based on the information available to them (Tarnopolskaya and Littleboy, 2015) as opposed to some objective 'truth'. The information used to build these perceptions can come from different sources. Information may come via first-hand experience, through direct impacts or being involved in the organisation's engagement (Dare et al., 2014). It may come from observable properties of a project and/or organisation (Bitektine and Haack, 2015). Alternatively, information may come from second-hand sources such as other stakeholders, who may have direct experience of the project impacts or engagement (Dare et al., 2014) or may be 'gossiping' about things they have heard (Sommerfeld et al., 2007), or independent technical reports (Billing et al., 2021; Luke, 2017; Saenz, 2019).

Other sources, such as the media, government and the judicial system, act as 'judgment validation institutions', which represent 'critical sources of validity that fundamentally influence other evaluators' judgments' (Bitektine and Haack, 2015, p. 51). This means, information about compliance with regulations and legal decisions (Bitektine and Haack, 2015; Cashmore and Wejs, 2014; Gunningham et al., 2004; Jijelava and Vanclay, 2017; Zimmerman and Zeitz, 2002) and portrayal in the media (McCrea et al., 2020) represent vital aspects of how stakeholders determine an organisation's SLO. Information may be incorrect or misleading, with sources such as the media selecting and framing viewpoints and facts (Dare et al., 2014), thus biasing the information and echoing particular viewpoints (Bice et al., 2017).

3.2. Perceptions

The information received by an individual stakeholder will be used to form two main perceptions: of the properties and behaviours of the organisation/project (link A) and of others' judgements on the organisation (link B). A stakeholder's perception of others' judgements will include their perception of what the majority opinion, or collective

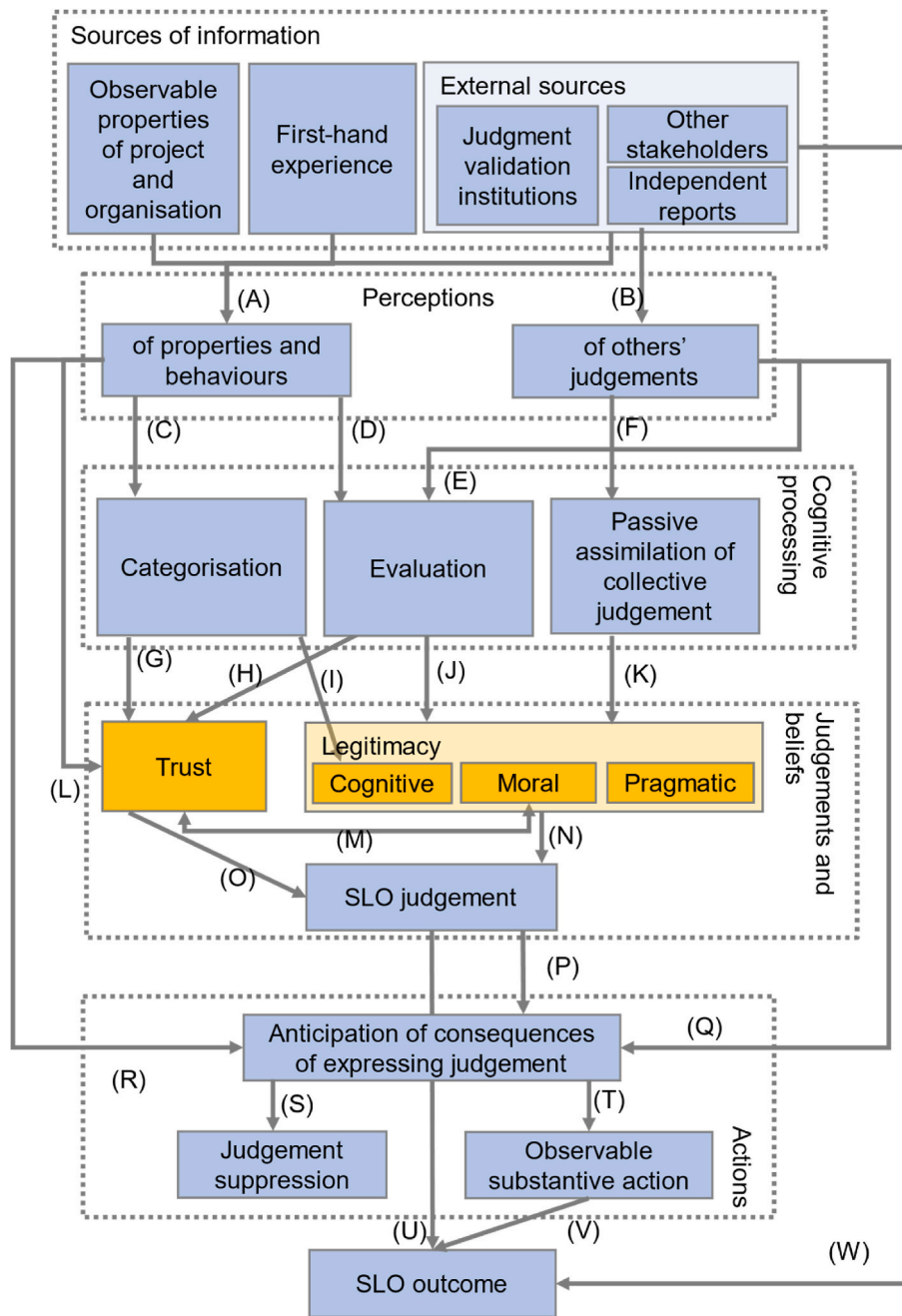


Fig. 1. Model of the process determining SLO outcomes from an individual gaining information about operations to their actions impacting the overall SLO outcome. Legitimacy and trust are highlighted as the two fundamental components of previous SLO conceptualisations.

judgement, defined as ‘the extent to which there appears to be a general consensus within a collectivity that the entity is appropriate for its social context’ (Tost, 2011, p. 689). The individual stakeholders’ perception of the properties and behaviours of the organisation/project will include factors such as its potential impacts (e.g. Hall, 2014), which will depend on the regional and social context (Prno and Slocombe, 2014; Tarnopolskaya and Littleboy, 2015), as well as attributes of the stakeholder themselves (Measham and Zhang, 2019).

The way in which stakeholders form perceptions from available information will differ depending on their existing views and filters (Billing et al., 2021). Stakeholders select the information they use to form perceptions and thus come to different conclusions from the same information (Billing et al., 2021). Four main attributes influence a piece of information’s credibility: source (Billing et al., 2021; Bozoyan and Vogt, 2016; Saenz, 2019), reliability (Bozoyan and Vogt, 2016), valence

(i.e. whether it is positive or negative) (Bozoyan and Vogt, 2016; Poortinga and Pidgeon, 2004; Tarnopolskaya and Littleboy, 2015), and fit (i.e. how well it fits in with a stakeholder’s existing worldview) (Billing et al., 2021; Luke, 2017).

Stakeholders are more likely to believe information from a source close to them, or that they believe to be unbiased (Bozoyan and Vogt, 2016), for example, independent technical reports (Billing et al., 2021; Luke, 2017). Personal experience is perceived to be more reliable than ‘gossip’ or the repetition of other’s views (Bozoyan and Vogt, 2016; Sommerfeld et al., 2007). Negative information is more salient than positive (Bozoyan and Vogt, 2016; Poortinga and Pidgeon, 2004; Tarnopolskaya and Littleboy, 2015), with negative information able to have an impact on an individual’s behaviour even when from an ‘untrustworthy’ source (Bozoyan and Vogt, 2016). Finally, the way stakeholders perceive information will also be based on its fit with their existing

views and values (Billing et al., 2021; Luke, 2017).

3.3. Cognitive processing

Cognitive processing is an active process whereby perceptions are used to form judgements and beliefs (Bitektine, 2011; Bitektine and Haack, 2015). Cognitive processing requires mental effort (Bitektine and Haack, 2015), which humans aim to minimise while still processing the maximum amount of information (Rosch, 1978). Different methods of cognitive processing take different amounts of effort, with passive assimilation taking the least, then categorisation, then evaluation (Bitektine, 2011; Bitektine and Haack, 2015). As such, the methods used will depend on factors such as the stakeholder's motivation and interest, previous knowledge and available time (Bitektine, 2011; Bitektine and Haack, 2015).

3.3.1. Passive assimilation of collective judgement

Passive assimilation is when stakeholders simply conform to the judgement they perceive as most widely accepted (link F) (Bitektine and Haack, 2015; Tost, 2011) and represents the baseline mode of mental operations (Kahneman, 2011). As such, it will be the primary means by which individual stakeholders form judgements under conditions of organisational stability (Bitektine and Haack, 2015).

3.3.2. Categorisation

Categorisation is a rapid cognitive process in which information about an organisation is generalised based on grouping it with other, better-known, entities (Bitektine, 2011; Bitektine and Haack, 2015; Mcknight, 1998). Judgements can then be made about an organisation's characteristics with very little information (Mcknight, 1998). The grouping will be made based on perceptions of the organisation's properties or behaviours (link C). McKnight (1998) describe three forms of categorisation: unit grouping, stereotyping, and reputation categorisation.

3.3.2.1. Unit grouping. Unit grouping occurs when an individual puts the entity being trusted in the same group as themselves (Mcknight, 1998) based on features such as shared membership of an organisation (Hurley, 2006; Mcknight, 1998), common values, and traits like personality or gender (Hurley, 2006; Measham and Zhang, 2019). This creates an assumption of shared goals and values (Hurley, 2006; Mcknight, 1998). This process is seen in SLO through the importance of shared experience (Thomson and Joyce, 2008), physical proximity/shared background (Billing et al., 2021), and group membership (Saenz, 2019) in determining relationships between stakeholders and organisations.

3.3.2.2. Stereotyping. Stereotyping is the placing of another entity into a general category, from which generalisations about their likely attributes are made (Mcknight, 1998). This occurs within the SLO context through generalisations about an organisation based on their industry (Dare et al., 2014) or proxy factors such as the organisation's size (Baumber et al., 2019; Billing et al., 2021). This means an SLO can be impacted by the positive or negative legacy of past interactions between stakeholders and other organisations, even when they have no connection to the organisation or project in question (Prno and Slocombe, 2014).

3.3.2.3. Reputation. Reputation is the assignment of attributes to another entity based on information from external sources (Mcknight, 1998) about previous behaviour (Mayer and Davis, 1995). Within SLO, the impact of reputation can be seen in reduced trust for organisations that had gained a negative reputation from previous operations (Baines and Edwards, 2018) and an increased level of trust for brands that had been present in the area for longer (Baumber et al., 2019; Koivurova et al., 2015). Reputation is seen as a key determinant of SLO as it

precedes an organisation's move to an area, thus having the ability to facilitate or block operations (Parsons et al., 2014).

3.3.3. Evaluation

Evaluation is the process of actively forming opinions based on perceptions of the organisation and project's properties and behaviours (link D) (Bitektine and Haack, 2015). The collective validity judgement also impacts evaluation through contributing to decisions as to the appropriate norms to evaluate the organisation against (link E) (Bitektine and Haack, 2015). This process is influenced by the context within which the decision is being made, with attributes of both stakeholders and their external context having an impact.

3.4. Judgements and beliefs

Through cognitive processing, stakeholders form judgements and beliefs from their perceptions (Bitektine and Haack, 2015; Cassam, 2010). Particularly important to SLO are beliefs about the organisation's trustworthiness (links G and H) and judgements of its legitimacy (links I through K) (Boutillier and Thomson, 2011; de Jong and Humphreys, 2016; Leeuwerik et al., 2021; Luke, 2017). Many factors impact an individual's judgements and beliefs, for example Gifford and Nilsson (2014) highlight 18 personal and social factors that influence pro-environmental concern, including: values; political and world views; place attachment; age; gender; religion; urban-rural differences; norms; social class; impact on self; and cultural and ethnic variations.

3.4.1. Legitimacy

Legitimacy was the first element of SLO to be conceptualised (Gehman et al., 2017; Joyce and Thomson, 2000) and is present in the majority of SLO conceptualisations. Suchman (1995) poses one of the most widely accepted definitions of legitimacy (Bitektine and Haack, 2015; Gehman et al., 2017), defining it as:

'a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions' (Suchman, 1995, p. 574).

Legitimacy represents whether stakeholders deem an organisation's plans, actions, and consequences acceptable. There are multiple conceptualisations of legitimacy (Deephouse and Suchman, 2008), here we will use one based on Suchman (1995) splitting legitimacy into three categories: cognitive, based on whether the actions and presence of an organisation make sense relative to the stakeholder's worldview; pragmatic, based on whether the organisation's activities will benefit the stakeholder; and moral, based on whether the organisation's actions meet a set of moral norms.

3.4.1.1. Cognitive legitimacy. Cognitive legitimacy is present when stakeholders see an organisation or project as necessary or inevitable (Suchman, 1995) it is impacted by categorisation (link I) and assimilation of the collective judgement (link K) (Bitektine, 2011). Where an organisation has attained cognitive legitimacy, it is more able to avoid scrutiny and distrust (Leeuwerik et al., 2021). Suchman (1995) splits cognitive legitimacy into two variants: taken-for-grantedness and comprehensibility. Taken-for-grantedness relies on organisations having become such an integral part of the fabric of society that their continued presence, and often expansion, goes unquestioned (Cashmore and Wejs, 2014; Saenz, 2019; Thomson and Boutillier, 2011). Comprehensibility is determined by the extent to which a project or organisation fits into stakeholders' existing worldviews, belief systems and daily life (Suchman, 1995). Where cultural models exist to explain an organisation and its actions, its activity will be more predictable, meaningful, and inviting for stakeholders (ibid). Where organisations are trying to gain comprehensibility, they must provide logical and easily understandable explanations of how their actions make sense and fit within society

(Leeuwerik et al., 2021; Saenz, 2019; Suchman, 1995).

3.4.1.2. Pragmatic legitimacy. Pragmatic legitimacy is self-interested (de Jong and Humphreys, 2016; Saenz, 2019; Suchman, 1995), based on expected material benefits (Baines and Edwards, 2018; Suchman, 1995) and meeting the interests of the impacted party (de Jong and Humphreys, 2016). It is promoted by transactional relationships where approval is gained through monetary compensation (Baines and Edwards, 2018; Mercer-Mapstone et al., 2017). Where stakeholders rely on organisations to meet their needs, they are less likely to expect other benefits and more likely to accept negative consequences of projects (Gunningham et al., 2004; Harvey and Bice, 2014; Moffat et al., 2016).

3.4.1.3. Moral legitimacy. Moral legitimacy is judgement of whether an organisation is doing 'the right thing' (de Jong and Humphreys, 2016) based on an assessment of the activities compared to moral values and norms (link J) (Leeuwerik et al., 2021). It is socio-tropic, referring to the benefit to society as a whole rather than any particular individual (Bitektine, 2011; de Jong and Humphreys, 2016; Suchman, 1995). The norms used to determine moral legitimacy will vary between cultures and situations (link E) (Bitektine and Haack, 2015; Boutilier and Thomson, 2011) as well as personal factors. Taking gender as an example from the list of factors affecting judgements in section 3.4, women have been found to be more altruistic (Dietz et al., 2002 *per* Measham and Zhang, 2019); rank environmental concerns more highly (Gifford and Nilsson, 2014 *per* Measham and Zhang, 2019); have greater moral conviction against mining (Measham and Zhang, 2019). Moral legitimacy can broadly be split into consequential legitimacy, which relates to whether the impacts are seen as acceptable and good, and procedural legitimacy, which is whether the organisation/project is seen as following socially acceptable methods (Suchman, 1995).

3.4.1.3.1. Consequential. Consequential legitimacy is determined by whether impacts are acceptable or good, representing a teleological view of legitimacy (Reeder, 2022). Within SLO, issues of moral consequential legitimacy focus on two dimensions of consequences. The first is the impacts themselves, whether this be provision of economic benefits (MacPhail et al., 2022), noise pollution (Hall, 2014), impacts on social infrastructure (Moffat et al., 2016), or the destruction of a sacred site (Thomson and Boutilier, 2011). The second focuses on whether the distribution of impacts is fair and just (Baumber et al., 2019, 2021; Dare et al., 2014; França Pimenta et al., 2021; Lesser et al., 2021; MacPhail et al., 2022; Moffat et al., 2016; Thomson and Boutilier, 2011) with authors variably focussing on equity (e.g. Baumber et al., 2021; Lesser et al., 2021) or equality (e.g. Thomson and Boutilier, 2011) as desired outcomes. Where distributional fairness has not been considered, marginalised communities often experience the costs of a project while benefits go to relative elites (MacPhail et al., 2022).

3.4.1.3.2. Procedural. In some cases, results may be difficult or impossible to measure directly, for example due to being in the future, ambiguous or high stochasticity (Suchman, 1995). Where this occurs, the legitimacy of actions can be assessed against how well they follow socially accepted techniques and procedures, which confer procedural legitimacy, implying the organisation is making an effort in good faith to achieve difficult to measure ends (Suchman, 1995). This focus on the means as opposed to the ends follows deontological ethics (Roby, 2018). As a concept, procedural legitimacy is included in many conceptualisations of SLO under the names procedural fairness (e.g. Baumber et al., 2021, 2019; de Jong and Humphreys, 2016, 2016; França Pimenta et al., 2021; Luke, 2017; Moffat and Zhang, 2014; Saenz, 2019) and procedural justice (Heffron et al., 2021; Luke, 2017). Perceived procedural fairness has been found to be of greater importance to stakeholders than the impacts a project has on social infrastructure (Moffat and Zhang, 2014), potentially mediated by its impact on trust (link M) (*ibid*).

Stakeholder inclusion in the decision-making process is a key aspect

of procedural legitimacy (Leeuwerik et al., 2021). This is difficult as there is still much discussion about which stakeholders should be included (Boutilier, 2020) and, even within legitimate stakeholders, there may be competing demands (Koivurova et al., 2015) which must somehow be weighted (Moffat et al., 2016). One key issue here is recognition justice, which 'requires that the values, worldviews, and lifeways of all peoples be acknowledged and respected' (MacPhail et al., 2022, p. 5), particularly important when working with Indigenous peoples, who have a recognised right to self-determination (de Jong and Humphreys, 2016; Heffron et al., 2021).

How the decision is made is also important, sometimes called 'throughput legitimacy' (Risse and Kleine, 2007). Stakeholders must be able to meaningfully participate in the decision-making process (Hall, 2014; Heffron et al., 2021; Koivurova et al., 2015; MacPhail et al., 2022). Requiring that stakeholders have access and opportunity (Baumber et al., 2021; Heffron et al., 2021; MacPhail et al., 2022) as well as the time (Billing et al., 2021) and confidence to express their views (MacPhail et al., 2022). Alongside this, there must be institutional capacity to listen (MacPhail et al., 2022) and a lack of bias from decision makers (MacPhail et al., 2022) including not having a pre-determined outcome (Hall, 2014; Moffat et al., 2016).

Stakeholders may also assess the other information used in decision-making, often requiring information from independent technical reports to be available and utilised before accepting a project (Billing et al., 2021; Luke, 2017; Saenz, 2019). Further, decision making requires transparency (Baumber et al., 2021; Leeuwerik et al., 2021; MacPhail et al., 2022; Prno, 2013). This requires access to and provision of information (Billing et al., 2021; Heffron et al., 2021; MacPhail et al., 2022; Prno, 2013), particularly for those impacted (MacPhail et al., 2022) including clarity about potential risks (Leeuwerik et al., 2021). This allows organisations and stakeholders to build a common future vision (Leeuwerik et al., 2021).

3.4.2. Trust

Trust is defined as a willingness and intention to accept vulnerability to risk or loss through the actions of another, based on positive expectations of their intentions and behaviour (Kim et al., 2004; Thomson and Joyce, 2008). In this way, trust 'refers to the future, builds on the past and is continually reproduced in the present' (Bachmann and Zaheer, 2013, p. 275). Violating the expectations trust is built upon, for example taking advantage of a vulnerable stakeholder (de Jong and Humphreys, 2016) can lead to 'negative relational consequences' (Moffat and Zhang, 2014, p. 62). Trust consists of a stakeholder judgement of their vulnerability and their trusting beliefs, that is their beliefs of whether the organisation has attributes that mean they will carry through on their promises (Mayer and Davis, 1995; Mcknight, 1998). Trust impacts stakeholders' perceptions of fairness (Bianchi and Brockner, 2012), contact quality and the acceptability of decisions (Moffat and Zhang, 2014), all aspects of legitimacy (link L). Thus, having a high level of trust is likely to substantially increase an organisation's ability to gain an SLO.

3.4.2.1. Vulnerability. A stakeholder's decision to trust will be based on how vulnerable they judge themselves to be, in situations of greater vulnerability they will require a greater level of trusting beliefs in order to trust the organisation (Hurley, 2006; Mayer and Davis, 1995). Vulnerability will be based on a combination of the extent of the perceived impacts (link L), the amount of risk a stakeholder is willing to be subjected to (Hurley, 2006), and the stakeholder's power (Hurley, 2006). Power may come from stakeholder attributes, such as wealth (Boutilier, 2020), or local enabling factors and legislation (Gunningham et al., 2004; Wilson, 2016). An individual's confidence in the governance structures surrounding the project will increase their perceived power (Moffat et al., 2016; Prno, 2013; Zhang and Moffat, 2015). This is based on the regional political context, such as institutional capacity,

and the stakeholder's perception of the government's ability and motivations (Lesser et al., 2021). Where stakeholders believe the government to have poor capacity (Zhang and Moffat, 2015) or a regulator to be overly 'pro-development' (Prno and Slocombe, 2014) they are less likely to trust their interests are being adequately protected (Lesser et al., 2021), and more likely to reject the project on the grounds of not being certain enough they will not be harmed (Zhang et al., 2015).

3.4.2.2. Trusting beliefs. The three trusting beliefs are: ability, whether an organisation is believed to have the skills to carry out its promises; benevolence, whether the organisation is believed to be willing to disadvantage themselves to benefit others; and predictability and integrity, whether the organisation is believed to be adhering to an acceptable set of principles (Mayer and Davis, 1995; Mcknight, 1998). These beliefs are formed based on categorisation (link G) (Bitektine, 2011; Dare et al., 2014; Mayer and Davis, 1995; Mcknight, 1998; Prno and Slocombe, 2014) and evaluation (link H) (e.g. Saenz, 2019; Leeuwierik et al., 2021).

3.4.2.2.1. Ability. To carry through on their promises, organisations must have the required skills (both technical and interpersonal) and knowledge (Butler and Cantrell, 1984; Mayer and Davis, 1995). Within the SLO literature, this is generally captured as 'competence-based trust' (de Jong and Humphreys, 2016; Moffat and Zhang, 2014). This belief is specific to the organisation's expertise (Mayer and Davis, 1995). When organisations are working with stakeholders from a very different cultural background, ability will include beliefs about the organisation's understanding of local norms and cultural values (Harvey and Bice, 2014).

3.4.2.2.2. Benevolence. Benevolence is an inclination to be kind, often including putting others' needs before your own (Hurley, 2006). This belief is represented in SLO as questions about whether the organisation has 'our best interests in mind' (Thomson et al., 2010, p. 16). This may be shown through respect and consideration for welfare (Moffat and Zhang, 2014) and allowing local agency (Hall, 2014) through sharing power (Thomson and Boutilier, 2011), collaboration and providing opportunities (Thomson and Joyce, 2008) and acting on concerns, not just listening (Dare et al., 2014). This covers many of the elements of procedural legitimacy and, as such, meeting the requirements of procedural legitimacy will contribute to whether a stakeholder chooses to trust the organisation (link M).

3.4.2.2.3. Predictability and integrity. Predictability and integrity revolve around the belief that the trustee is adhering to an acceptable set of principles (Butcher, 2019; de Jong and Humphreys, 2016; Mayer and Davis, 1995, p. 719; Moffat and Zhang, 2014). It is no good believing in an organisation's ability and benevolence if their actions are unpredictable (Hurley, 2006). This also broadly covers the conceptualisations of credibility within SLO, in which the organisation 'is seen as following through on promises and dealing honestly with everyone' (Thomson and Boutilier, 2011, p. 1785). This requires organisations to be seen as truthful and honest (de Jong and Humphreys, 2016), keep promises (Harvey and Bice, 2014; Prno, 2013), meet expectations (Moffat and Zhang, 2014) and be transparent about their interests and motivations (Baines and Edwards, 2018; Harvey and Bice, 2014; Saenz, 2019). Organisations must also act on concerns as they arise (Dare et al., 2014), take responsibility for failures (Baumber et al., 2019), and accept fault when necessary (Heffron et al., 2021).

3.4.3. SLO judgement

The formation of an SLO judgement likely requires both trust (link O) and legitimacy (link N). Boutilier and Thomson (2011) argue that SLO can be gained without trust, through achieving 'economic legitimacy', which has many parallels with pragmatic legitimacy. This contradicts other accounts, which find trust to be a key component of SLO, contributing to the establishment of legitimacy (Moffat and Zhang, 2014). It is likely that different judgements and beliefs are important to

different stakeholders (Lesser et al., 2021), for example, a directly impacted stakeholder is more likely to be concerned about the benefits they will receive than a distant stakeholder (Lesser et al., 2021).

A stakeholder's judgement of an organisation's SLO is not binary, and is generally conceptualised as falling into one of four levels: withdrawal, whereby an SLO has not been granted; acceptance, where stakeholders do not object to the organisation or project; approval, where stakeholders view the project favourably; and psychological identification, where stakeholders believe that the company will always act in the community's best interests and share responsibility for a project's success (Thomson and Boutilier, 2011). It is also likely that beyond withdrawal, stakeholders can begin to accept or identify with the opposition to an organisation or project, further solidifying their disapproval (Luke, 2017).

3.5. Actions

Once a judgement has been formed, the stakeholder must decide whether they will externalise, potentially impacting the world around them (Bitektine and Haack, 2015; Boutilier, 2020). This decision is based on the potential consequences of expressing the judgement and will result in the judgement either being suppressed (link S) or expressed through observable substantive actions (link T) (Bitektine and Haack, 2015).

3.5.1. Anticipation of consequences of expressing judgement

Stakeholders are able to assess the likely consequences of publicly expressing their judgement (link R) (Bitektine and Haack, 2015). This will be based on the judgement itself (link P) and whether it differs from their perception of collective judgement (link Q) (Bitektine and Haack, 2015) as well as perceptions of the organisation (link R), such as the likelihood of sanctions or violent suppression of their views (Bitektine and Haack, 2015; de Jong and Humphreys, 2016). The impacts of expressing judgements need not only come from authorities, but may also act through other means such as media backlash or ostracization by peers (Bitektine and Haack, 2015). These impacts will be dependent on stakeholder attributes such as power (Bitektine and Haack, 2015; Hurley, 2006). Stakeholders will also assess how likely expressing their judgement is to cause change, i.e., the positive consequences of expressing their judgement. A likely example of this found in SLO are industry phase effects, in which people are more likely to reject a project during the pre-approval phase as there is a unique and relatively low cost opportunity to say no, relative to once the project is operational (McCrea et al., 2020).

3.5.2. Judgement suppression

Where stakeholders deem the likely negative impacts of expressing their judgement outweigh the positive impacts, their judgement will be suppressed (link S) (Bitektine and Haack, 2015). Some people are simply more risk averse, and so may be less likely to risk negative consequences (Hurley, 2006). This process can lead to marginalised stakeholders feeling unable to express their judgements (Moffat et al., 2016).

3.5.3. Observable substantive action

Where stakeholders judge the benefits of expressing their opinion to outweigh the costs, they will externalise it through an observable substantive action (link T) (Bitektine and Haack, 2015). The methods of externalising judgements that are available to a stakeholder depend on stakeholder power, local enabling factors (Wilson, 2016) such as a political context designed for procedural empowerment (Gunningham et al., 2004), and historical context (Nyembo and Lees, 2020).

3.6. SLO outcome

The level of SLO depends on the SLO judgement of the individual stakeholder (link U) and the SLO judgements of other actors (link W).

There is little agreement on exactly whose views matter when considering an SLO (Boutillier, 2020), however it is generally considered that some semblance of a consensus is required (Harvey and Bice, 2014). Whether or not operations go ahead is impacted by the stakeholder's actions (link U) and the actions of other stakeholders (link V) as well as external contextual factors (Boutillier, 2020; Prno and Slocombe, 2014). Depending on the nature of stakeholders' actions, they may impact the organisation directly, for example through protest (de Jong and Humphreys, 2016; Franks et al., 2014; Hanna et al., 2016; Vanclay and Hanna, 2019), or indirectly through influencing the collective judgement (Bitektine and Haack, 2015). Regional context, such as changeable economic conditions, may also impact operations irrespective of whether or not SLO has been granted (Prno and Slocombe, 2014).

The four potential SLO outcomes are shown in Fig. 2. Where the SLO and operational status are coupled (Fig. 2: top right and bottom left quadrants), it can be seen as generally good for the stakeholders as their demands and wishes have been met. Where there is a mismatch between SLO and operational status (Fig. 2: top left and bottom right quadrants), it can be seen as negative for the stakeholders. Operations may have positive SLO with the stakeholder but be halted for some other reason (Fig. 2, bottom right quadrant), such as the actions of other stakeholders (e.g. Boutillier, 2020) or external economic pressures (e.g. Prno and Slocombe, 2014; Thomson and Boutillier, 2011). Alternatively, the stakeholder may choose not to or be unable to act on their negative SLO judgement in a way that halts operations (Fig. 2, top left quadrant) (e.g. Syn, 2014), particularly when there are substantial power imbalances, including the threat and use of violence (de Jong and Humphreys, 2016).

For an organisation, assuming the operations going ahead is a desirable outcome, any situation in which they are halted is negative (Fig. 2, bottom two quadrants). Where operations go ahead with positive SLO, it is good for the organisation (Fig. 2, top right quadrant). Where operations go ahead with negative SLO (Fig. 2, top left quadrant) it is less clear, as although operations may still be profitable, allowing the organisation to gain from continued operations, negative SLO can bring with it considerable costs and operational risk (Hall, 2014; Jijelava and Vanclay, 2014; Miller, 2014), so is likely to be worse for the organisation than operating with a positive SLO.

The SLO outcome will feed back into individual's decision-making process through providing new information, such as whether the organisation met expectations (Moffat and Zhang, 2014). This process allows stakeholders to continually assess the SLO of the organisation/project (Leeuwerik et al., 2021).

4. Conclusion

This paper provides an explanatory model for how individual stakeholders come to SLO judgements and how these may impact the operations of a project or organisation, building upon existing component-based (e.g. Moffat and Zhang, 2014) and process-based (e.g. Boutillier, 2020) conceptualisations of SLO. In doing so, it highlights how stakeholders can impact operations, and the importance of supporting marginalised stakeholders such that they are able to express their judgements and practice their right to self-determination. The model is not intended to quantify how SLO might be achieved through facilitating proportional allocation of the various elements included. Rather, it is designed to highlight the complexity associated with gaining SLO and to highlight the myriad of factors that organisations need to consider. It is anticipated that the importance of different elements will be context dependent meaning learning from a variety of disparate cases will be required to determine whether there are co-dependencies between factors that will assist organisations planning for the SLO. Once this has been achieved, this model will provide a means by which organisations can consider how their actions may impact SLO judgement formation, thus allowing for better project planning and outcomes.

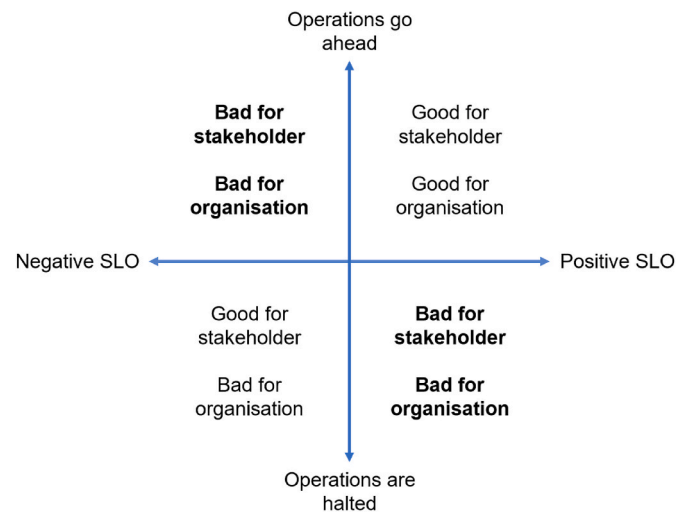


Fig. 2. The four potential SLO outcomes, adapted from Prno and Slocombe (2014). SLO outcomes have two dimensions, whether SLO was granted (x-axis) and whether operations go ahead/continue (y-axis), each quadrant represents one of the four outcomes, with the text inside showing its relevance to the community and organisation. Quadrants in which the SLO judgements and operational outcomes are uncoupled have been highlighted with bold text.

Author contributions

Alice Stuart: Conceptualisation, Methodology, Investigation, Data Curation, Visualisation, Writing – Original draft preparation, Writing - Review & Editing. **Alan Bond:** Conceptualisation, Writing - Review & Editing, Supervision. **Aldina Franco:** Conceptualisation, Writing - Review & Editing. **Julia Baker:** Conceptualisation, Writing - Review & Editing. **Chris Gerrard:** Conceptualisation, Writing - Review & Editing. **Vittoria Danino:** Conceptualisation, Writing - Review & Editing. **Kylie Jones:** Conceptualisation, Writing - Review & Editing.

Funding and interests

This work was supported by the Natural Environment Research Council and ARIES DTP [grant number NE/S007334/1]; and CASE partnership with Anglian Water Services Ltd.

Anglian Water Services Ltd were consulted on the conceptualisation and assisted with proof editing of the manuscript. Neither the National Environmental Research Council nor ARIES DTP were involved in the manuscript.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data are included in the supplementary tables in the attached file and are also available on FigShare.

Acknowledgement

This work was supported by the Natural Environment Research Council and ARIES DTP [grant number NE/S007334/1]; and CASE partnership with Anglian Water Services Ltd. Anglian Water Services Ltd were consulted on the conceptualisation and assisted with proof editing of the manuscript. Neither the National Environmental Research Council nor ARIES DTP were involved in the manuscript.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.resourpol.2023.103962> as downloadable file (with article) and also on FigShare..

References

- Bachmann, R., Zaheer, A., 2013. *Handbook of Advances in Trust Research*. Edward Elgar Publishing.
- Baines, J., Edwards, P., 2018. The role of relationships in achieving and maintaining a social licence in the New Zealand aquaculture sector. *Aquaculture* 485, 140–146. <https://doi.org/10.1016/j.aquaculture.2017.11.047>.
- Baumber, A., Scerri, M., Schweinsberg, S., 2019. A social licence for the sharing economy. *Technol. Forecast. Soc. Change* 146, 12–23. <https://doi.org/10.1016/j.techfore.2019.05.009>.
- Baumber, A., Schweinsberg, S., Scerri, M., Kaya, E., Sajib, S., 2021. Sharing begins at home: a social licence framework for home sharing practices. *Ann. Tourism Res.* 91, 103293 <https://doi.org/10.1016/j.annals.2021.103293>.
- Bianchi, E.C., Brockner, J., 2012. In the eyes of the beholder? The role of dispositional trust in judgments of procedural and interactional fairness. *Organ. Behav. Hum. Decis. Process.* 118 (1), 46–59. <https://doi.org/10.1016/j.obhdp.2011.12.005>.
- Bice, S., 2014. What gives you a social licence? An exploration of the social licence to operate in the Australian mining industry. *Resources* 3 (1), 62–80. <https://doi.org/10.3390/resources3010062>.
- Bice, S., Brueckner, M., Pforr, C., 2017. Putting social license to operate on the map: a social, actuarial and political risk and licensing model (SAP Model). *Resour. Pol.* 53, 46–55. <https://doi.org/10.1016/j.resourpol.2017.05.011>.
- Billing, S.-L., Rostan, J., Tett, P., Macleod, A., 2021. Is social licence to operate relevant for seaweed cultivation in Europe? *Aquaculture* 534, 736203. <https://doi.org/10.1016/j.aquaculture.2020.736203>.
- Bitelkine, A., 2011. Toward a theory of social judgments of organizations: the case of legitimacy, reputation, and status. *Acad. Manag. Rev.* 36 (1), 151–179.
- Bitelkine, A., Haack, P., 2015. The “macro” and the “micro” of legitimacy: toward a multilevel theory of the legitimacy process. *Acad. Manag. Rev.* 40 (1), 49–75. <https://doi.org/10.5465/amr.2013.0318>.
- Black, L., 2013. The social licence to operate: your management framework for complex times. <https://www.routledge.com/The-Social-Licence-to-Operate-Your-Management-Framework-for-Complex-Times/Black/p/book/9781909293724>.
- Boutillier, R.G., 2014. Frequently asked questions about the social licence to operate. *Impact Assess. Proj. Apprais.* 32 (4), 263–272. <https://doi.org/10.1080/14615517.2014.941141>.
- Boutillier, R.G., 2020. Narratives and networks model of the social licence. *Resour. Pol.* 69, 101869 <https://doi.org/10.1016/j.resourpol.2020.101869>.
- Boutillier, R.G., Thomson, I., 2011. Modelling and measuring the social licence to operate: fruits of a dialogue between theory and practice. *Proceedings, International Mine Management* 10.
- Bozoyan, C., Vogt, S., 2016. The impact of third-party information on trust: valence, source, and reliability. *PLoS One* 11 (2), e0149542. <https://doi.org/10.1371/journal.pone.0149542>.
- Brueckner, M., Durey, A., Pforr, C., Mayes, R., 2014. The civic virtue of developmentalism: on the mining industry’s political licence to develop Western Australia. *Impact Assess. Proj. Apprais.* 32 (4), 315–326. <https://doi.org/10.1080/14615517.2014.929784>.
- Brueckner, M., Eabrasu, M., 2018. Pinning down the social licence to operate (SLO): the problem of normative complexity. *Resour. Pol.* 59, 217–226. <https://doi.org/10.1016/j.resourpol.2018.07.004>.
- Business for Social Responsibility, 2003. The social licence to operate. https://static1.squarespace.com/static/5bb24d3c9b8fe8421e87bbb6/t/5c3bd87340ec9ab9b9f3/fdf9/1547425908683/file_BSR_Social_Licence_to_Operate.pdf.
- Butcher, J.R., 2019. “Social licence to operate” and the human services: a pathway to smarter commissioning? *Aust. J. Publ. Adm.* 78 (1), 113–122. <https://doi.org/10.1111/1467-8500.12340>.
- Butler, J.K., Cantrell, R.S., 1984. A behavioral decision theory approach to modeling dyadic trust in superiors and subordinates. *Psychol. Rep.* 55 (1), 19–28. <https://doi.org/10.2466/pr0.1984.55.1.19>.
- Cashmore, M., Wejs, A., 2014. Constructing legitimacy for climate change planning: a study of local government in Denmark. *Global Environ. Change* 24, 203–212. <https://doi.org/10.1016/j.gloenvcha.2013.09.019>.
- Cassam, Q., 2010. JUDGING, BELIEVING AND THINKING.
- Cleland, M., 2013. Unpacking Social Licence: toward a Framework for Addressing the Social Licence Challenge Facing the Natural Resource Sector. *Canada West Foundation*.
- Cooney, J., 2017. Reflections on the 20th anniversary of the term ‘social licence’. *J. Energy Nat. Resour. Law* 35 (2), 197–200. <https://doi.org/10.1080/02646811.2016.1269472>.
- Dare, M. (Lain), Schirmer, J., Vanclay, F., 2014. Community engagement and social licence to operate. *Impact Assess. Proj. Apprais.* 32 (3), 188–197. <https://doi.org/10.1080/14615517.2014.927108>.
- de Jong, W., Humphreys, D., 2016. A failed Social Licence to Operate for the neoliberal modernization of Amazonian resource use: the underlying causes of the Bagua tragedy of Peru. *Forestry: Int. J. Financ. Res.* 89 (5), 552–564. <https://doi.org/10.1093/forestry/cpw033>.
- Deepphouse, D.L., Suchman, M., 2008. Legitimacy in organizational institutionalism. In: *The Sage Handbook of Organizational Institutionalism*, p. 30.
- Dietz, T., Kalof, L., Stern, P.C., 2002. Gender, values, and environmentalism. *Soc. Sci. Q.* 83 (1), 353–364. <https://doi.org/10.1111/1540-6237.00088>.
- Dowd, A.-M., James, M., 2014. A social licence for carbon dioxide capture and storage: how engineers and managers describe community relations. *Soc. Epistemol.* 28 (3–4), 364–384. <https://doi.org/10.1080/02691728.2014.922639>.
- Edwards, P., Lacey, J., 2014. Can’t climb the trees anymore: social licence to operate, bioenergy and whole stump removal in Sweden. *Soc. Epistemol.* 28 (3–4), 239–257. <https://doi.org/10.1080/02691728.2014.922637>.
- Edwards, P., Lacey, J., Wyatt, S., Williams, K.J.H., 2016. Social licence to operate and forestry – an introduction. *Forestry: Int. J. Financ. Res.* 89 (5), 473–476. <https://doi.org/10.1093/forestry/cpw036>.
- França Pimenta, A.A., Demajorovic, J., Saraiva de Souza, M.T., de Carvalho Pedro, S., Pisano, V., 2021. Social licence to operate model: critical factors of social acceptance of mining in the Brazilian Amazon. *Resour. Pol.* 74, 102237 <https://doi.org/10.1016/j.resourpol.2021.102237>.
- Franks, D.M., Cohen, T., 2012. Social Licence in Design: constructive technology assessment within a mineral research and development institution. *Technol. Forecast. Soc. Change* 79 (7), 1229–1240. <https://doi.org/10.1016/j.techfore.2012.03.001>.
- Franks, D.M., Davis, R., Bebbington, A.J., Ali, S.H., Kemp, D., Scurrah, M., 2014. Conflict translates environmental and social risk into business costs. *Proc. Natl. Acad. Sci. USA* 111 (21), 7576–7581. <https://doi.org/10.1073/pnas.1405135111>.
- Gehman, J., Lefsrud, L.M., Fast, S., 2017. Social license to operate: legitimacy by another name? *Can. Publ. Adm.* 60 (2), 293–317. <https://doi.org/10.1111/capa.12218>.
- Gifford, R., Nilsson, A., 2014. Personal and social factors that influence pro-environmental concern and behaviour: a review. *Int. J. Psychol.* 49 (3), 141–157. <https://doi.org/10.1002/ijop.12034>.
- Gjølberg, M., 2009. The origin of corporate social responsibility: global forces or national legacies? *Soc. Econ. Rev.* 7 (4), 605–637. <https://doi.org/10.1093/ser/mwp017>.
- Gunningham, N., Kagan, R.A., Thornton, D., 2004. Social license and environmental protection: why businesses go beyond compliance. *Law Soc. Inq.* 29 (2), 307–341. <https://doi.org/10.1111/j.1747-4469.2004.tb00338.x>.
- Hall, N.L., 2014. Can the “social licence to operate” concept enhance engagement and increase acceptance of renewable energy? A case study of wind farms in Australia. *Soc. Epistemol.* 28 (3–4), 219–238. <https://doi.org/10.1080/02691728.2014.922636>.
- Hamann, R., Kapelus, P., 2004. Corporate social responsibility in mining in southern africa: fair accountability or just greenwash? *Development* 47 (3), 85–92. <https://doi.org/10.1057/palgrave.development.1100056>.
- Hanna, P., Vanclay, F., Langdon, E.J., Arts, J., 2016. Conceptualizing social protest and the significance of protest actions to large projects. *Extr. Ind. Soc.* 3 (1), 217–239. <https://doi.org/10.1016/j.exis.2015.10.006>.
- Harvey, B., 2011. SIA from a developers perspective: foreword. In: *New Directions in Social Impact Assessment*. Edward Elgar Publishing, pp. xxvii–xxxiii.
- Harvey, B., Bice, S., 2014. Social impact assessment, social development programmes and social licence to operate: tensions and contradictions in intent and practice in the extractive sector. *Impact Assess. Proj. Apprais.* 32 (4), 327–335. <https://doi.org/10.1080/14615517.2014.950123>.
- Heffron, R.J., Downes, L., Ramirez Rodriguez, O.M., McCauley, D., 2021. The emergence of the ‘social licence to operate’ in the extractive industries? *Resour. Pol.* 74, 101272 <https://doi.org/10.1016/j.resourpol.2018.09.012>.
- Howard-Grenville, J., Nash, J., Coglianesi, C., 2008. Constructing the license to operate: internal factors and their influence on corporate environmental decisions. *Law Pol.* 30 (1), 73–107. <https://doi.org/10.1111/j.1467-9930.2008.00270.x>.
- Hurley, R.F., 2006. The decision to trust. *Harvard Business Review* 84 (9), 55–62.
- Jabareen, Y., 2009. Building a conceptual framework: philosophy, definitions, and procedure. *Int. J. Qual. Methods* 8 (4), 49–62. <https://doi.org/10.1177/160940690900800406>.
- Jijelava, D., Vanclay, F., 2014. Assessing the social licence to operate of development cooperation organizations: a case study of mercy corps in samtskhe-javakheti, Georgia. *Soc. Epistemol.* 28 (3–4), 297–317. <https://doi.org/10.1080/02691728.2014.922638>.
- Jijelava, D., Vanclay, F., 2017. Legitimacy, credibility and trust as the key components of a social licence to operate: an analysis of BP’s projects in Georgia. *J. Clean. Prod.* 140, 1077–1086. <https://doi.org/10.1016/j.jclepro.2016.10.070>.
- Jijelava, D., Vanclay, F., 2018. How a large project was halted by the lack of a social Licence to operate: testing the applicability of the Thomson and Boutillier model. *Environ. Impact Assess. Rev.* 73, 31–40. <https://doi.org/10.1016/j.eiar.2018.07.001>.
- Joyce, S., Thomson, I., 2000. Earning a social licence to operate: social acceptability and resource maintenance in Latin America. *Can. Min. Metall. Bull.* 93.
- Kahneman, D., 2011. Thinking, Fast and Slow. Farrar, Straus and Giroux.
- Kim, P.H., Ferrin, D.L., Cooper, C.D., Dirks, K.T., 2004. Removing the shadow of suspicion: the effects of apology versus denial for repairing competence- versus integrity-based trust violations. *J. Appl. Psychol.* 89 (1), 104–118. <https://doi.org/10.1037/0021-9010.89.1.104>.
- Koivurova, T., Buanes, A., Riabova, L., Didyk, V., Ejdemo, T., Poelzer, G., Taavo, P., Lesser, P., 2015. ‘Social licence to operate’: a relevant term in Northern European mining? *Polar Geogr.* 38 (3), 194–227. <https://doi.org/10.1080/1088937X.2015.1056859>.
- Leeuwerik, R.N.C., Rozemeijer, M.J.C., van Leeuwen, J., 2021. Conceptualizing the interaction of context, process and status in the Social Licence to operate: the case of marine diamond mining in Namibia. *Resour. Pol.* 73, 102153 <https://doi.org/10.1016/j.resourpol.2021.102153>.

- Lesser, P., Gugerell, K., Poelzer, G., Hitch, M., Tost, M., 2021. European mining and the social license to operate. *Extr. Ind. Soc.* 8 (2), 100787 <https://doi.org/10.1016/j.exis.2020.07.021>.
- Luke, H., 2017. Social resistance to coal seam gas development in the Northern Rivers region of Eastern Australia: proposing a diamond model of social license to operate. *Land Use Pol.* 69, 266–280. <https://doi.org/10.1016/j.landusepol.2017.09.006>.
- MacPhail, F., Lindahl, K.B., Bowles, P., 2022. Why Do Mines Fail to Obtain a Social License to Operate?: Insights from the Proposed Kallak Iron Mine (Sweden) and the Prosperity/New Prosperity Gold–Copper Mine (Canada). *Environmental Management*. <https://doi.org/10.1007/s00267-021-01587-3>.
- Mayer, R.C., Davis, J.H., 1995. *An Integrative Model of Organizational Trust*, vol. 27.
- McCrea, D.R., Walton, D.A., Jeanneret, M.T., 2020. An opportunity to say no: comparing local community attitudes toward onshore unconventional gas development in pre-approval and operational phases. *Resour. Pol.* 69, 101824 <https://doi.org/10.1016/j.resourpol.2020.101824>.
- McGrath, S.K., Whitty, S.J., 2017. Stakeholder defined. *Int. J. Manag. Proj. Bus.* 10 (4), 721–748. <https://doi.org/10.1108/IJMPB-12-2016-0097>.
- Mcknight, D.H., 1998. Initial trust formation in new organizational relationships. *Acad. Manag. Rev.* 23 (3), 473–490.
- Measham, T.G., Zhang, A., 2019. Social licence, gender and mining: moral conviction and perceived economic importance. *Resour. Pol.* 61, 363–368. <https://doi.org/10.1016/j.resourpol.2018.11.001>.
- Mercer-Mapstone, L., Rifkin, W., Moffat, K., Louis, W., 2017. Conceptualising the role of dialogue in social licence to operate. *Resour. Pol.* 54, 137–146. <https://doi.org/10.1016/j.resourpol.2017.09.007>.
- Miller, C., 2014. Globalization and discontent. *Soc. Epistemol.* 28 (3–4), 385–392. <https://doi.org/10.1080/02691728.2014.922643>.
- Moffat, K., Lacey, J., Zhang, A., Leipold, S., 2016. The social licence to operate: a critical review. *Forestry: Int. J. Financ. Res.* 89 (5), 477–488. <https://doi.org/10.1093/forestry/cpv044>.
- Moffat, K., Zhang, A., 2014. The paths to social licence to operate: an integrative model explaining community acceptance of mining. *Resour. Pol.* 39, 61–70. <https://doi.org/10.1016/j.resourpol.2013.11.003>.
- Morrison, J., 2014. *The Social License: How to Keep Your Organization Legitimate*. Palgrave Macmillan UK. <http://ebookcentral.proquest.com/lib/uea/detail.action?docID=1779917>.
- Munduate, L., Bennebroek Gravenhorst, K.M., 2003. Power dynamics and organisational change: an introduction. *Appl. Psychol.* 52 (1), 1–13. <https://doi.org/10.1111/1464-0597.00120>.
- Nyembo, N., Lees, Z., 2020. Barriers to implementing a social licence to operate in mining communities: a case study of peri-urban South Africa. *Extr. Ind. Soc.* 7 (1), 153–160. <https://doi.org/10.1016/j.exis.2020.01.007>.
- Owen, J.R., Kemp, D., 2013. Social licence and mining: a critical perspective. *Resour. Pol.* 38 (1), 29–35. <https://doi.org/10.1016/j.resourpol.2012.06.016>.
- Parsons, R., Lacey, J., Moffat, K., 2014. Maintaining legitimacy of a contested practice: how the minerals industry understands its ‘social licence to operate’. *Resour. Pol.* 41, 83–90. <https://doi.org/10.1016/j.resourpol.2014.04.002>.
- Parsons, R., Moffat, K., 2014. Constructing the meaning of social licence. *Soc. Epistemol.* 28 (3–4), 340–363. <https://doi.org/10.1080/02691728.2014.922645>.
- Poortinga, W., Pidgeon, N.F., 2004. Trust, the asymmetry principle, and the role of prior beliefs. *Risk Anal.* 24 (6), 1475–1486. <https://doi.org/10.1111/j.0272-4332.2004.00543.x>.
- Prno, J., 2013. An analysis of factors leading to the establishment of a social licence to operate in the mining industry. *Resour. Pol.* 38 (4), 577–590. <https://doi.org/10.1016/j.resourpol.2013.09.010>.
- Prno, J., Slocombe, D.S., 2014. A systems-based conceptual framework for assessing the determinants of a social licence to operate in the mining industry. *Environ. Manag.* 53 (3), 672–689. <https://doi.org/10.1007/s00267-013-0221-7>.
- Reeder, J.P., 2022. *Three Moral Traditions*, vol. 19.
- Richert, C., Rogers, A., Burton, M., 2015. Measuring the extent of a Social License to Operate: the influence of marine biodiversity offsets in the oil and gas sector in Western Australia. *Resour. Pol.* 43, 121–129. <https://doi.org/10.1016/j.resourpol.2014.12.001>.
- Risse, T., Kleine, M., 2007. Assessing the legitimacy of the EU’s treaty revision methods. *J. Commun. Media Stud.: J. Common. Mark. Stud.* 45 (1), 69–80. <https://doi.org/10.1111/j.1468-5965.2007.00703.x>.
- Roby, B., 2018. *Virtue Ethics, Deontology, and Consequentialism*. University of Mary Washington.
- Rosch, E., 1978. Principles of categorization. In: *Cognition and Categorization*.
- Saenz, C., 2019. Building legitimacy and trust between a mining company and a community to earn social license to operate: a Peruvian case study. *Corp. Soc. Responsib. Environ. Manag.* 26 (2), 296–306. <https://doi.org/10.1002/csr.1679>.
- Salim, E., 2003. *Extractive Industries Review: Striking a Better Balance*, vol. 1. World Bank Group. <https://openknowledge.worldbank.org/bitstream/handle/10986/17705/842860v10WP0St00Box382152B00PUBLIC0.pdf?sequence=1&isAllowed=y>.
- Santiago, A.L., Demajorovic, J., Rossetto, D.E., Luke, H., 2021. Understanding the fundamentals of the Social Licence to Operate: its evolution, current state of development and future avenues for research. *Resour. Pol.* 70, 101941 <https://doi.org/10.1016/j.resourpol.2020.101941>.
- Shaw, D.G., 1992. The Exxon Valdez oil-spill: ecological and social consequences. *Environ. Conserv.* 19 (3), 253–258. <https://doi.org/10.1017/S0376892900031052>.
- Sommerfeld, R.D., Krambeck, H.-J., Semmann, D., Milinski, M., 2007. Gossip as an alternative for direct observation in games of indirect reciprocity. *Proc. Natl. Acad. Sci. USA* 104 (44), 17435–17440. <https://doi.org/10.1073/pnas.0704598104>.
- Suchman, M.C., 1995. Managing legitimacy: strategic and institutional approaches. *Acad. Manag. Rev.* 20 (3), 571. <https://doi.org/10.2307/258788>.
- Syn, J., 2014. The social license: empowering communities and a better way forward. *Soc. Epistemol.* 28 (3–4), 318–339. <https://doi.org/10.1080/02691728.2014.922640>.
- Tarnopolskaya, T., Littleboy, A., 2015. November 29). Towards dynamic financial valuation of social licence to operate under uncertainty. In: Weber, T., McPhee, M.J., Andersen, R.S. (Eds.), *MODSIM2015, 21st International Congress on Modelling and Simulation*. 21st International Congress on Modelling and Simulation. <https://doi.org/10.36334/MODSIM.2015.E6.tarnopolskaya>. MODSIM2015).
- Taylor, D., Mahlangu, S., 2017. *Earning the Social Licence to Operate – A Case Study about Culture*.
- Thomson, I., Boutilier, R., 2011. The social licence to operate. In: Darling, P. (Ed.), *SME Mining Engineering Handbook*, third ed. Society for Mining, Metallurgy, and Exploration, pp. 673–690.
- Thomson, I., Boutilier, R.G., Mamani, J., Diez de Medina, J., 2010. Starting it right! Mineral exploration and the social licence to operate. *Mining Law* 4 (2), 13–20.
- Thomson, I., Joyce, S., 2008. What it Is and Why Does it Seem So Difficult to Obtain?, p. 16.
- Thornton, D., Kagan, R.A., Gunningham, N., 2003. *Shades of Green: Business, Regulation, and Environment*. Stanford University Press.
- Tost, L.P., 2011. An integrative model of legitimacy judgments. *Acad. Manag. Rev.* 36 (4), 686–710. <https://doi.org/10.5465/amr.2010.0227>.
- Vanclay, F., 2017. Principles to gain a social licence to operate for green initiatives and biodiversity projects. *Curr. Opin. Environ. Sustain.* 29, 48–56. <https://doi.org/10.1016/j.cosust.2017.11.003>.
- Vanclay, F., Esteves, A.M., Aucamp, I., Research, E., Franks, D.M., 2015. *Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects*. International Association for Impact Assessment.
- Vanclay, F., Hanna, P., 2019. Conceptualizing company response to community protest: principles to achieve a social licence to operate. *Land* 8 (6), 101. <https://doi.org/10.3390/land8060101>.
- Wilburn, K.M., Wilburn, R., 2011. *Achieving Social License to Operate Using Stakeholder Theory*, vol. 15.
- Wilson, E., 2016. What is the social licence to operate? Local perceptions of oil and gas projects in Russia’s Komi Republic and Sakhalin Island. *Extr. Ind. Soc.* 3 (1), 73–81. <https://doi.org/10.1016/j.exis.2015.09.001>.
- Wüstenhagen, R., Wolsink, M., Bürer, M.J., 2007. Social acceptance of renewable energy innovation: an introduction to the concept. *Energy Pol.* 35 (5), 2683–2691. <https://doi.org/10.1016/j.enpol.2006.12.001>.
- Zhang, A., Moffat, K., 2015. A balancing act: the role of benefits, impacts and confidence in governance in predicting acceptance of mining in Australia. *Resour. Pol.* 44 (C), 25–34.
- Zhang, A., Moffat, K., Lacey, J., Wang, J., González, R., Uribe, K., Cui, L., Dai, Y., 2015. Understanding the social licence to operate of mining at the national scale: a comparative study of Australia, China and Chile. *J. Clean. Prod.* 108, 1063–1072. <https://doi.org/10.1016/j.jclepro.2015.07.097>.
- Zimmerman, M.A., Zeitz, G.J., 2002. Beyond survival: achieving new venture growth by building legitimacy. *Acad. Manag. Rev.* 27 (3), 414–431.