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## **Social license to operate: a case study from a Brazilian mining industry**

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**Abstract:** In productive activities with great potential to generate economic, social and environmental impacts, conventional approaches based on legal compliance are no longer sufficient to render the actions of the companies lawful and make the involvement of the stakeholders effective. Studies stress the need for mining activities to receive legitimacy represented by an SLO issued by the company's stakeholders. This study analyses how a social project carried out by one of the largest mining companies in Brazil contributed to the SLO process. As a methodological procedure, interviews to the community representatives were conducted. The results show that, although the strategy adopted by the company contributed towards the SLO process, the development of robust methodologies to engage other company's stakeholders and to sustain the local legitimacy achieved is required.

**Keywords:** mining; social license to operate; SLO; social impact; corporate social responsibility; stakeholders.

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## 1 Introduction

Currently, the social issues emerge as major elements in the academic debates and the corporate practices associated with extraction industries. In this context, several initiatives in this sector can be identified in order to understand and properly respond to the social context where such industries operate. As a result, several approaches have been implemented, such as social impact assessment, International Organization for Standardization (2010), community engagement and consultation, and social and communication specialist involved with community relationship teams (Franks and Cohen, 2012). The term Social License to Operate (SLO) emerges from facing this need. For Franks and Cohen (2012) the term adopted by the industry denotes the importance of social acceptance for continuous operation of mineral extraction and processing activities. However, even though the extractive industry is in the spotlight, scientific publications analysing concepts, approaches and results related to SLO only recent came out.

It is noticeable that, for productive activities with great potential to generate economic and social and environmental impacts, conventional approaches based on legal compliance are no longer sufficient to legitimise the corporate actions. (Solomon et al, 2008; Prno and Slocombe, 2012; Owen and Kemp, 2013). Studies stress the need for potentially impacting productive activities to receive an SLO 'issued' by the society, including the government, non-governmental organisations and communities.

For Thomson and Boutilier (2011), the term SLO was initially used in 1997 during a conference on mining and communities in Quito, Ecuador, supported by the World Bank.

The literature about SLO analysed presents sectors and productive activities with great potential impact, however, studies about mining activities stand out. The concentration of SLO studies about the mining sector is relevant, due to the potential social, environmental and economic impact, as well as the transitory nature of the business and the generation of a culture of dependence by the local community (Thomson and Boutilier, 2011; Petrova and Marinova, 2013). However, there is a lack of studies about the subject in the Brazilian scenario in comparison to more frequent studies carried out in Australia, Canada, and African countries.

Recognising that each context of mineral development is unique, this study focused on two small agricultural countryside towns of the State of Minas Gerais, Brazil. Even though the insights provided are relevant for other productive sectors, the mining sector provides major contributions as a study for having potentially controversial effects.

Adopting as focus the company's relationship with the local community, this study intended to understand how a social project made by one of the largest mining companies in Brazil contributed towards the SLO process. As theoretical basis this case study was built on the Stakeholders Theory (Freeman et al, 2004) and the study developed by Prno and Slocombe (2012) in a mining companies located in northern Canada. The methodological procedures included document analysis and interviews with the community.

This article is organised as follows. Besides this introduction, Section 2 presents the impacts and risks of the mining activities. Section 3 addresses the importance of understanding the role of stakeholders. Section 4 focuses on the review of the literature on SLO. Section 5 explains the methodology used to conduct the data collection and analysis. Section 6 analyses and discusses the results and Section 7 presents the conclusions of the study.

## **2 Impacts and risks of the mining activities**

The environmental impacts resulting from the mining activities are widely studied (Cragg et al., 1995; Martinez-Alier, 2001; Durucan et al., 2006; Twum, 2013; Kowalska, 2014). On the other hand, the social impact issue is the least investigated aspect of the triple bottom line sustainability concept, which involves economy, environment and society (Solomon et al, 2008).

According to Solomon et al (2008) understanding the social aspect in the mining sector is an increasingly necessary and critical requirement for a successful business. However, the social impacts of mining are hard to assess, especially because the social meanings vary according to the perspective of each stakeholder, and we should also consider the variable nature of the social impacts of the sector, because the mines may vary in size, duration, location, mineral deposits and regulatory framework. They may also vary throughout the life time of the activity, from the exploitation, through operation and its closing (Esteves and Vanclay, 2009). A study carried out by IBRAM – Instituto Brasileiro de Mineração (2013a, 2013b) point out that the mining impacts may be positive, negative, direct and indirect and its intensity changes with the geographic localisation, climatic conditions, demographic density, economic aspects and local infrastructure.

For Esteves and Vanclay (2009), the social impacts are complex in themselves, due to the nature and force of the pre-existing social system. Aledo et al. (2010) highlight the importance of considering the multi-causal origins of the social impacts. Likewise, Funtowics and Ravetz (2000) mention the need for considering the dynamics of the social processes, characterised by the conditions of uncertainty, complexity and intangibility. In spite of the singularity and complexity of the social impacts, Petrova and Marinova (2013) suggest some potential impacts such as: the qualitative changes to the local social landscape, the demographic changes and the structural and functional transformation of the local social environment. For Thomson and Boutilier (2011) the transient nature of the mining business and the generation of a culture of dependence by the local community are factors that influence the social impact.

The complexity of social dynamics may be seen in cases where the impacts are transformed from positive to negative, such as the job positions created that attract a great flow of workers to the place and assist economic development. On the other hand the local population increase helps breaking the social balance, such as the increase of the demand and prices for the local resources, introduction of diseases, increase of the cost of living, stress on the local water supply, interference in traditional hunting and fishing, as well as the increase of socially undesirable activities (Vanclay, 2002; Hilson, 2002, 2011).

Those impacts drew attention to the issue of mobilisation and the company's relationship with the local actors, highlighting the potential risks and conflicts that stakeholders dissatisfied with the company may create. One challenge for the company is maintaining the social and economic equity existing levels, as well as overcoming the barrier of the local community pressures (Petrova and Marinova, 2013). In this context, the importance of acknowledging the potential impacts and risks, along with mapping and understanding the expectations and the role of the company's stakeholders are critical factors for the company's business.

### **3 The importance of understanding the role of stakeholders**

A company may be described as a system of stakeholders interconnected by a complex network of relationships. Each of them has different rights, goals, expectations and responsibilities, providing certain resources or contributions to the company. (Freeman et al, 2004). For Freeman (1984), the stakeholders should be considered as part of the business strategy, and asserts that we cannot analyse the business world as if it were separated from the ethics or politics, because the companies are building a collaborative relationship with the stakeholders.

The theory of stakeholders postulates that the companies are responsible for delivering benefits to all of them, and not only to shareholders and customers. (Jones, 2007). Accordingly, Post et al. (2002) stresses four basic components of the stakeholder theory that are relevant and should be managed:

- 3.1 the flow of potential benefits and threats between companies and stakeholders
- 3.2 the varied and discrepant issues or interests
- 3.3 the networks and roles of participants
- 3.4 the participation of the stakeholders.

For Mutti et al. (2012), management of the stakeholders guides the survival and success of a company, with the creation of wealth, values or satisfaction for each group of stakeholders. Lyytimäki (2014) argues that the success of this process depends on the managers 'capacity of guaranteeing transparency when communicating sustainability. However, if one or more groups of stakeholders were dissatisfied, the company may be impaired. Stakeholders with unmet expectations may generate conflicts and risks for the company. Knowledge of such expectations, as well as the awareness of the company's managers of the importance of the relationship with their stakeholders, may generate strategies and mitigating actions to avoid and/or lighten the possible conflicts (Aaltonen et al., 2008).

According to Aaltonen et al. (2008) dissatisfied stakeholders may create several conflict situations, such as the capacity to block the local resources or to affect the image of a company via partnerships with NGO's on global levels.

Mutti et al. (2012) identified the main stakeholders in the Argentine mining sector, which were actively engaged in the debate about mining: the national government, the provincial government, the municipal authorities, the mining companies (which work in the several mineral prospecting, research and exploitation phases), the local communities; NGO's; base groups; unions; universities and the church.

However, regardless the region or country, the several studies point out the local communities as the main stakeholders of the mining sector, due to their proximity to the mining areas, sensitivity to the effects of the production processes and risk of impacting the company's results (Ali-Khan and Mulvihill, 2008; Prno and Slocombe, 2012).

Prno and Slocombe (2012) list several risks capable of affecting the company's results such as: interruption or suspension of mining activities, blockages, requests for retraction of government permits for mining and image impacts due to campaigns against mining broadcasted in the media. For Luning (2012) it is essential for the mining sector to develop a strategy for approaching and managing the company-local community

relationships, including the phase prior to exploitation, during operation activities and for mine closure planning and management.

In this context, the legal compliance with the environmental standards became insufficient to meet the society's expectations in regard to mining activities. Acknowledging the influence that local actors may have on the company's performance, managers must recognise the necessity to establish with the local community a new kind of permission to operate, based on legitimisation and acceptance of the company rights.

#### **4 Social license to operate**

The SLO is based on the assumption that the expectations of the communities affected by the enterprise usually exceed the legal matters. The SLO refers to the intangibles, the non-tacit part of the agreement made with the society or the social group, and allows an extraction or processing operation to begin and continue their operations (Gunningham et al., 2004; Franks and Cohen, 2012). The SLO concept arises from the framework of engineering within extraction industry, when light is shed on the need to respond to the social challenges, in addition to the customary technological and management challenges. According to Franks and Cohen (2012) there is a trend of engineering, sustainability and safety departments to deal with the technological issues in a neutral way, separating the technological research projects from the social influences.

The SLO may contribute to dealing with this gap, since it proposes a systemic view, integrating the social challenges to the already customary technological, production and management challenges. "A SLO issuance may be considered as the legitimisation of the company by its stakeholders. The complex and dynamic nature of the social processes leads to uncertain conditions that demand the adoption of a new rationale and new governance arrangements in the business environment (Funtowics and Ravetz, 2000; Berger and Luckmann, 2011). The SLO is a continuous negotiation process, a complement to the regulatory licenses, and not a product that may be granted by civil authorities, political structures or legal system (Franks and Cohen, 2012).

Thomson and Boutilier (2011) maintain that the term SLO was initially used in 1997 during a conference about mining and communities in Quito, Ecuador, supported by the World Bank. For Prno and Slocombe (2012) however, the concept came to be in the studies on mining made in northern Canada, based on sustainability and governance theories. Since 2007, it has been used by members of the International Mining Board – ICMM (Owen and Kemp, 2013). The SLO is adopted by the Mineral Board of Australia and the Mineral Association of Canada, and also by the Standard ISO 26000 of Social Responsibility.

For Ali-Khan and Mulvihill (2008), the SLO is 'issued' by the society as a whole: governments, communities, the public in general and the media. However, the local communities are the main actors, with the power to grant or take back the SLO. The role of governance and the institutions are major aspects to be considered in understanding an SLO (Prno and Slocombe, 2012). Mutti et al. (2012) conceptualises the SLO as a 'license' required by the community for the company to use the natural resources or the community resources, and non-compliance with such social license may cause the company a series of claims by its stakeholders. Within the scope of the SLO, the relationship with the stakeholders works in a way that the company's stakeholders are

identified, a relationship of collaboration and engagement with those stakeholders is developed, and only then may they ‘receive’ and maintain an SLO, which means legitimacy or continuous approval of its stakeholders (Thomson and Boutilier, 2011).

Nelsen and Scoble (2006) identified key factors for successfully obtaining an SLO, including maintenance of a positive corporate reputation, understanding of the local culture, language and history; the needs for educating the local community members about the project and ensuring an open communication channel between all stakeholders. Also Prno (2014), based on several case studies, identified four drivers for a SLO process

- 1 a SLO is built from relationships
- 2 sustainability is a dominant concern for communities
- 3 the generation of local benefits and assuring participation plays a crucial role in the SLO
- 4 adaptability is necessary to address the complexity.

Since this is a subject under construction, the literature presents a diversity of definitions and approaches for the SLO, however, it is a consensus that the companies should be granted an ‘authorisation’, a legitimacy not based only on legal compliance, but on how well a company is accepted by local communities, the government, NGO’s and the general society.

Table 1 summarises concepts and approaches adopted in the studies of SLO discussed in this paper.

**Table 1** SLO: concepts and approaches

| <i>Author and year</i>         | <i>Method adopted country and productive sector</i>  | <i>Concepts and approaches social license to operate (SLO)</i>   |
|--------------------------------|--|--|
| Howard-Grenville et al. (2008) | Exploratory study USA several companies and sectors participating NEPT <i>program top environmental performers</i>                     | Internal factors of the company are essential to obtain an SLO: management incentives, culture and organisational identity work as structuring factors for interpretations of the external pressures and assist in constructing the organisational responses for the SLO.  |
| Solomon et al. (2008)          | Literature and theories revision. Sector: Mining. Country: Australia <i>Mining and Minerals Sustainable Development Project (MMSD)</i> | The Social License to Operate (SLO) is an essential complement to the regular legal licenses. Understanding the social aspect in the mining sector is a critical requirement for a successful business. The social impacts of a mining operation are difficult to foresee, especially because the social meanings vary according to the perspective of each stakeholder. |
| Campbell and Roberts (2010)    | Case study USA three mining companies  | The local communities are gaining an increasingly political voice and in the licensing. process more resources are available to assist those who oppose a new mining operation on the site.  |
| Thomson and Boutilier (2011)   | Revision and analysis of literature SLO country: several sector: mining  | The SLO should be defined as existing when a mine or mining project has the continuous approval of the local community and other stakeholders. For the authors there are three levels of SLO: Level 1: Legitimacy, Level 2: Credibility; Level 3: Trust.   |

**Table 1** SLO: concepts and approaches (continued)

| <i>Author and year</i>   | <i>Method adopted country and productive sector</i>   | <i>Concepts and approaches social license to operate (SLO)</i>   |
|--------------------------|---|--|
| Prno and Slocombe (2012) | Revision of literature theories SLO. Examples of companies in Northern Canada. Sector: mining                   | SLO is an additional need, added to the legal compliance, for legitimacy of the company and meeting the society's expectations in relation to mining, in order to avoid conflicts and exposure to social risks.  |
| Owen and Kemp (2013)     | Revision and analysis of literature SLO country: several Sector: mining   | The SLO has a logic with 4 core factors: 1. The company should meet the stakeholders' expectations or adapt to them, 2. If the company fails to directly respond to the stakeholders, it should strive towards to doing so, 3. The company should consider that there are different stakeholders and expectations; 4. The difference between what the company assumes and what the stakeholders wish which widens the gap of expectations. |
| Falck et al. (2014)      | Mapping of stakeholders project <i>EOMiners</i> European Commission. Countries: Czech Republic and South Africa | The SLO is a challenge to mining, either for expansion of the existing projects, or for new ones, since ensuring this 'license' is an important factor for risks management, with gains for the environmental and economic issues and also to increase participation of the stakeholders.  |
| Prno 2014                | Case study four mining companies USA  | Drivers for SLO.<br>1 the building of relationships<br>2 sustainability as a dominant concern for communities<br>3 the generation of local benefits and assurance community participation play a crucial role in the SLO<br>4 adaptability is necessary to address the complexity.   |

*Source:* Elaborated by the authors

The literature on SLO focuses on productive sectors and activities with great potential impact, such as hydroelectric power plants, forest-based companies, such as that produce paper and cellulose, large civil construction projects and mining activities. However, most of the research projects are centred within the mining sector. This can be explained due to the high potential of social-environmental and economic impact related to mining operations, such as qualitative changes caused in the local social landscape, demographic changes, environmental changes and structural transformation of the local social environment (Petrova and Marinova, 2013).

In Brazil, although the mining operations had great relevance in the economic scenario, few studies specifically dealt with the SLO issues for this sector. Thus, in order to contribute with this debate, the methodological procedures adopted to analyse the SLO process in large mining enterprises in the country is presented below.

## 5 Research method

For this study on SLO, the research strategy adopted was the qualitative approach of descriptive and exploratory analysis (Denzin and Lincoln, 2000). As a research strategy, the case study was adopted to base the discussion on how the company interacted with the local community and its relationship with the SLO.

The case study methodology contributes towards the identification of the characteristics of a phenomenon, establishing correlations between variables, defining their nature and determining or confirming propositions of a certain theory (Yin, 2005). One of the important phases of application of the technique is the appropriate selection of the case study. For Eisenhardt (1989), the singularity of the case allows building hypotheses on little researched subjects. Company X is an example and unique case for the investigation, because it is regarded as one of the largest Brazilian mining companies, also operating in several countries. Due to strategic issues of the company, the name was fictitiously adopted.

The choice of Company X is justified by the expressive volume of investments in social actions for the relationship and development of the communities of the areas of influence of the business, as well as the existence of an Institute responsible for directing the social projects and qualification of the external social investment of the business units.

Another essential aspect of applying a case study is the use of several sources of evidence, because they allow the checking of the validity and reliability of the information by comparing the data surveyed with different sources of information. Thus, semi-structured interviews, document analysis and observation were used as data collection techniques (Gil, 1999; Godo and Mattos, 2010). 45 interviews were held with members of the community that were included in the agricultural ecology project carried out by the company. These members lived in rural areas that directly influence the company, i.e. close to the mines and the industrial plants for processing the minerals or in traffic areas used for the outflow of the production. The documents analysis included the report available on the Project implementation and results achieved. The observation focused on the agricultural project management, the relationship between companies' representatives and the family members and the commercialisation process of agricultural products.

In the period when the interviews and observation were carried out in the communities, both extraction mines were operational. Establishing the productive period is necessary, because according to IBRAM – Instituto Brasileiro de Mineração (2013a, 2013b) and Zaheer et al. (1999), the mining impacts are influenced by several factors, for instance the production stage.

As a theoretical basis this study is built on the Stakeholders Theory (Freeman et al, 2004). For organisation of the results, in turn, the key factors identified in the literature as important to obtain an SLO were considered and is presented in Table 2.



**Table 2** Key factors to obtain an SLO

| <i>Key factors to obtain an SLO</i>   | <i>Authors</i>                        |
|---|---------------------------------------|
| <ul style="list-style-type: none"> <li>• Maintenance of positive corporate reputation</li> <li>• Understanding of the culture and local vocation</li> <li>• Need to educate the local actors on the project</li> <li>• Ensure open communication between all stakeholders.</li> </ul>   | Nelsen and Scoble (2006)              |
| <ul style="list-style-type: none"> <li>• Public Participation</li> <li>• Local qualification for decision-making</li> <li>• Opportunities of social learning in the communities</li> <li>• Investment in local community</li> <li>• Relationship</li> <li>• Sustainability as a dominant concern to community</li> <li>• Adaptability to address the complexity.</li> </ul> | Prno and Slocombe (2012), Prno (2014) |

*Source:* Elaborated by the authors

All recorded interviews were transcribed. Then the transcripts were examined, seeking full elements or themes corresponding to the key factors to obtain the SLO. Also agreements, contrasts and disagreements among respondents were identified. The most important findings from this process are briefly commented in the next topic.

## 6 Analysis and discussion of the results

### 6.1 The mining company under study

Company X was founded in 1918 and operates in the financial and industrial sectors. Mining and metallurgy are key business areas for the company. It involves mineral exploitation and processing of aluminium, zinc and nickel in industrial plants and mines located in Brazil and abroad, being one of the top-five zinc producers in the world.

As explained in the methodology, Company X occupies a prominent place in the mining sector, employing 10,000 collaborators in 17 industrial units, 11 of them in Brazil and 4 abroad. In 2014, it was one of the finalists of the National Innovation award, in the categories Large Companies and Innovation Management.

The business units researched herein operate in two Brazilian municipalities, one is a mineral extraction and a nickel plant and the other one is for zinc; both have the mine and the processing plant on-site. The industrial plants and mines researched are located in two small Brazilian municipalities; both have a predominantly agricultural economic profile, in addition to mining. Municipality A has an estimated population of 4,302 inhabitants and a territorial area of 218.792 km<sup>2</sup> (IBGE, 2013) and an Human Development Index (HDI) of 0.670 (2010). Municipality B in turn has an estimated population of 20,506 inhabitants, a territorial area of 1,913.396 km<sup>2</sup> (IBGE, 2013) and an HDI of 0.742 (2010).

As previously stated, the intention of this study is to understand how a social project with the local community, carried out by one of the largest mining companies in Brazil, contributed towards the process of SLO.

Company X accomplishes several projects and social investment programs in the places where it operates. Among the several social projects developed by the company, the agricultural ecology is considered the most important one due to its results, including the relationship with the community and the significant social improvements achieved. The project encouraged the local agricultural vocation and developed the generation of income of rural families inhabiting the mining areas.

## *6.2 The agricultural ecology Project and the relationship with the local community*

The agricultural ecology project was developed by the mining Company X and relied on a internal partnerships, with the Institute maintained by the corporate group, and external partnerships, such as government and technical organisations. The goal of Company X was developing income generation, as well as contributing towards the development of the location surrounding it, assisting in the maintenance of the SLO through a collaborative relationship with the local community.

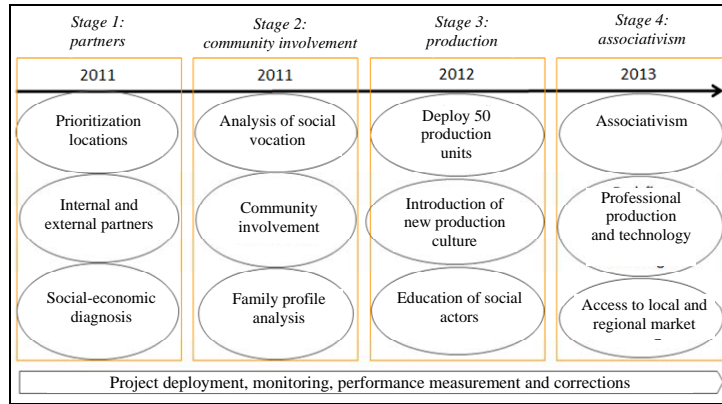
The project methodology proposes a system for planting pesticide-free gardens with fruits and vegetables and involves work, income, food safety, technological qualification and access to the market. Initially, the agricultural ecology project involved 50 families located in rural areas with direct influence over the company. During the three-year period of the project, 5 families gave up participating due to health problems, moving away and selling the property.

The families involved had a social-economic profile of 1 minimum wage on average; the age of the family providers were between 45 and 65, with 4 people per residence. Agriculture was the main source of income. The presence of women handling and managing the agricultural-ecologic gardens, as well as in trading the products, was observed. There was also value added to production, such as the cleaning of the products and the use of packaging.

From the 50 families that began the project, 15 from municipality A traded their products by means of an agreement with a regional hypermarket, adding barcodes and nutritional value labels to the packaging; eight families from municipality B organised a local open-air market for direct sales to the employees of Company X, as well as the provision of vegetables for the restaurant of the company's Forest Unit, which was still being tested at the end of this research, due to the difficulties the producers faced for regularising their delivery schedules. The remaining families accessed local trading channels, such as small markets, free markets and direct sales to consumers. The strategy adopted by Company X involved four stages, described in Figure 1.

In the strategy adopted by Company X, stage 1 involved prioritisation of the 2 municipalities, based on the economic and productive significance of the business, being a small-sized municipality more likely to be positively impacted by the project. There were also partnerships with the government, technical organisation and the forest department which is a company that belongs to the same corporate group. The project also has benefited from guidelines for social investment developed by the Social Institute of the corporate group.

**Figure 1** Stages of the project agricultural ecology developed by the company (see online version for colours)



Source: company’s internal reports

The strategy for community involvement in stage 2 was helped by the analysis of the profile of the rural families in the surroundings of the business and influenced areas. The main criteria adopted to be a part of the agricultural ecology project was the social vulnerability of the families. In stage 3, there was education of the community for production of the vegetables as an alternative to the predominant dairy culture in the area, and also the option for organic pesticide-free cultivation and increased food consumption by the families. In stage 4, two rural associations were organised, one leader per rural district was chosen to support the communications and the trading network. In municipality B, the formation of a local development board involving the whole community with a thematic group of agricultural ecology, was also supported by the Company.

### 6.3 Research results

In order to analyse the contribution of the agricultural ecology project undertaken by Company X to obtain the SLO, the key factors described by Nelsen and Scoble (2006) , Prno and Slocombe (2012) and Prno (2014) were identified.

- a the understanding of the local culture and vocation: seen in stages 1 and 2 via the local diagnosis and analysis of the local vocation made by Company X
- b the need to educate the community members and create opportunities of social learning in the communities: seen in stage 3, via education of the local community members regarding production, technology, social organisation, associativism and how to access the market
- c the improving of qualifications for local community members for decision-making and assurance of open communication between all stakeholders: identified on stage 4, via social organisation, associativism and the establishment of local leaderships to support the trade network and communication within the community

- d the public participation: identified in municipality B, though the development of the community board, which has a thematic group of agricultural ecology, supported by the company.

From the 50 families invited to participate in the project, five declined right away. Interviews were held with 45 local community members. Regarding the key factor ‘Maintenance of a positive corporate reputation’, 41 out of the 45 families interviewed, or 94%, stated the social-economic situation of the family unit was improved. Only three of them, or 6%, indicated that there was no improvement, because they did not produce the volume required for commercialisation due to health issues. The families considered as improvements the following: house refurbishing, furniture purchase, utility vehicle to transport the production, payment of physicians and medicine and financial aid for their children and grandchildren.

The improvement in the diet due the consumption of a variety of vegetables was also pointed out by the families as a positive impact related to the project: 41 families, or 91%, indicated that their food improved, three families, or 6%, continued eating the same food, and one family did not answer. Regarding the legitimacy of the company by the community, the interviewees were asked about the following questions:

- a if they considered the company’s investments as a benefit for their family and the community in general
- b if the agricultural ecology project improved their relationship with the company
- c if the project assisted in the communication between their community and the company.

For 42 families, or 94%, the project was a benefit for their family and for the community in general, and three families, or 6%, did not answer. Regarding the improvement of the relationship with the company, 41 families, or 91%, indicated that the relationship improved, three families, or 6%, continued with the same relationship as before, and one family did not answer. And in question c, regarding the communication with the company, 41 families, or 94%, answered that the agricultural ecology project assisted in the communication between their community and the company, three families, or 6%, indicated there was no improvement, and one family did not answer.

Considering the arguments of Ali-Khan and Mulvihill (2008) that the local communities are the main actors with the power to grant or take back the SLO, interviews reveals that the legitimacy of Company X is increasing among the members of the agricultural ecology project who live in the influenced areas of the site. The results also reinforced two of the four guiding principles for the establishment of an SLO, pointed out by Prno (2014). The agricultural ecological project has established a new channel of communication between company and community improving their relationship. Also it has confirmed the importance of investments made in the local communities in the process of an SLO, since the majority of respondents agreed with the positive impacts generated by the project on the families and community.

Although the local communities are the most influent actors of the SLO process, Prno and Slocombe (2012) emphasise the importance for a company to guarantee the approval of a wide range of stakeholders. In the case studied, in addition to the local community, there was the involvement of the government and a technical organisation. Nevertheless, there is also the need for the SLO to involve other company’s stakeholders, in addition to

the local community, to reach governance agreements. The agricultural ecologic project could benefit from working together other public policies such as the Brazil's Food Acquisition Program. For Sobreiro Filho and Whitacker, (2014) this cooperation between private initiatives with public policies can increase sustainability of agricultural familiar programs in Brazil.

Another important evidence from the case study is the challenge the company faces to maintain the SLO granted by the community, if we consider that the SLO is a continuous negotiation process (Franks and Cohen, 2012). 12 months later, after the first field trip, the number of families involved in the agricultural ecology project decreased. Some of them gave up participating in this initiative because of the lack of interest in continuing to grow the agricultural products demanded by the project instead of the former products they were used to growing. Also the commitments demanded by the project relating to agricultural production and commercialisation stimulated some members to leave the project.

It is possible to note that the agricultural ecology project developed by Company X contributed towards the SLO, however, within the scope of the SLO, other governance arrangements need to be identified by the company in order to develop a collaboration and engagement relationship. As stated by Thomson and Boutilier (2011), legitimacy or continuous approval by the company's stakeholders are essential in order to 'receive' and maintain an SLO.

## **7 Final considerations**

This article conceptualised the term SLO and identified the key factors to obtain an SLO. Analysis of the key factors proposed by Nelsen and Scoble (2006), Prno and Slocombe (2012) and Prno (2014) shows that the strategy adopted by Company X for the agricultural ecology project was essential to obtaining an SLO

The key factors 'understanding of the local culture and vocation'; "Need to educate the local actors and opportunities for social learning in the communities"; "Local qualification for decision-making and Assurance of open communication between all stakeholders" and 'Public participation', were identified in the strategies of Company X. The diagnosis and analysis of the local vocation, the actions carried out for the education of the local community members in social organisation and associativism, the formation of local leaderships for the trading network and the support for the creation of a local development board in Municipality B reinforce this argument. Besides, these strategies helped to improve the relationship between company and community, as well as generate positive impacts of the project on local community in the perception of the respondents

As a result, it was possible to find evidence of the company's legitimacy, as perceived by the family, members of the agricultural ecology project, who live in the influenced areas of the company. Although, the local community is the main actor with the power to grant or take back the SLO (Ali-Khan and Mulvihill, 2008; Campbell and Roberts, 2010), it is important to address that an SLO should be 'issued' by the society as a whole, including governments, communities, general public and media (Mutti et al., 2012).

Research results show also that the legitimacy gained by Company X it is not a static process. In a period of time of just 12 months, the number of family members that decided to leave the project, because of the conflicts between personal expectations and

project demands, grew. Therefore, continuity of the negotiations and continuous approval of the company by the local community emerged as one of the main challenges for maintaining the SLO in the case studied. These characteristics of the SLO process were also identified in the research conducted by Thomson and Boutilier (2011); Franks and Cohen (2012) and Nelsen and Scoble (2006): where the maintenance of a positive corporate reputation is considered the main challenge faced by companies.

From these results, and adopting the company's relationship with the local community as a focus, it is possible to conclude that the agricultural ecology project, by Company X, one of the largest mining companies in Brazil, helped to bring about the SLO process. On the other hand, the remaining company's stakeholders must be taken into account, as well as the challenge of the continuous approval of the company by the local community.

As the SLO process is a continuous negotiation process, and considering the constant changes in the social setting and variations of social meanings according to the perspective of each stakeholder, future research should include several other stakeholders as government, NGO and other representatives.

In spite of the limits of a single case study which prevents the generalisation of conclusions, we suggest that the analysis of the strategy adopted by Company X may contribute towards the debate on the acquisition and maintenance of the SLO in the Brazilian setting.

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