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Centre for Social Responsibility in Mining

DESIGNING SUSTAINABILITY CERTIFICATION FOR GREATER IMPACT

Case Studies

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Acronyms

ASM	Artisanal and Small-Scale Mining
CSRM	Centre for Social Responsibility in Mining
HSE	Health, Safety and Environment
ISEAL	International Social and Environmental Accreditation and Labelling Alliance
ISO	International Organization for Standardization
ICMC	International Cyanide Management Code
NGO	Non-Governmental Organisation
PPE	Personal Protective Equipment
RJC	Responsible Jewellery Council
SMI	Sustainable Minerals Institute
UQ	University of Queensland

Executive Summary

The number and use of sustainability certification schemes (schemes[1]) are rapidly increasing, but doubt still persists about their real contributions. This research report aims to explore the impacts of sustainability certification schemes on the ground by undertaking two exploratory case studies based on qualitative information. The aim of the case studies is not to undertake a comparative analysis of the performance of the case studies but to identify impacts of two selected certification schemes, considering participants' points of view. Also, analysis is conducted to assess whether different design characteristics of schemes lead to better outcomes. This report represents the third stage of an applied research project looking into the effectiveness of sustainability certification schemes and standards in the minerals industry and the potential role these initiatives can play to improve standards for responsible mining.

Impact evaluation studies on sustainability certification schemes are important instruments not only to add to the growing body of knowledge on the impacts of such schemes, but to address current questions about the effectiveness of such initiatives in delivering positive outcomes. Although there is a consensus among different stakeholders, including standard-setting bodies, governments and civil society representatives, about the importance and need of impact evaluation studies on sustainability standard systems, at the moment substantial knowledge and evidence gaps still persist, especially in the mineral and mining sectors.

This report aims to fill these gaps by exploring participants' perceptions regarding the impacts of two selected sustainability certification schemes in mining – the International Cyanide Management Code (ICMC) and the Responsible Jewellery Council (RJC). The analysis presented in this report is based only on information obtained from a qualitative research approach and provided by participants interviewed during the two case studies. Some of the key findings from this report are:

<u>Key findings from both case studies</u>

- Improvements in management systems, health and safety and environmental (HSE) performance, capacity building and a company's reputation were some of the internal impacts mentioned by participants in both case studies.
- Schemes improved companies' stakeholder engagement processes and communication strategies in both case studies.
- Although in both cases participants provided similar comments regarding the internal impacts of the schemes, this was not the case for external impacts. These differences are associated with the different local contexts in which the two case studies were conducted.
- International and well-recognised certification schemes positively affect participants' perceptions in relation to schemes' legitimacy and certified companies' reputations.
- Improvements in productivity and costs, access to specific markets of certified products, help to obtain the social licence to operate, and risks and compliance with applicable regulations were also identified as positive internal impacts, in a smaller proportion, in both case studies.
- The ICMC's requirements to train workers and personnel to operate cyanide facilities and respond to exposures and releases of cyanide, allied to the requirements to engage with stakeholders and improve communication

[1] In this report we use the term sustainability certification schemes (schemes) to refer to all of the types of certification schemes and standards that address governance, social and/or environmental issues, resulting in a public claim, label or certificate attesting to compliance.

and disclosure regarding cyanide impacts, are important to improve awareness of different stakeholders not only about the risks of cyanide use but about general aspects of health and safety and environmental impacts.

- The ICMC's clear requirements and straightforward indicators are considered key features to deliver positive impacts on the ground and increase uptake.
- Best practices of assurance processes used by the ICMC – such as a qualified assurers, a well-designed assurance protocol, a quality review process and the public availability of the assurance results – contribute to the credibility of the ICMC and its legitimacy with internal and external stakeholders.

Key findings from the Case study 2: Minera Yanaquihua - RJC

- The RJC's requirements to regularly assess and implement programs to improve practices and reduce social and environmental risks on ASM are important to improve the work conditions and human rights of local artisanal miners and to minimise the environmental impacts of these artisanal miners.
- Suggestions to improve accessibility through availability of training material in local languages and use of local auditors were observed.
- The RJC's requirements to participate in initiatives that enable the professionalism and formalisation of ASM have a positive impact not only on the formalisation of these artisanal miners but on their livelihoods, practices and productivity.
- The RJC's requirements to support the development of the local community through backing community initiatives such as local procurement had a positive impact delivering economic and social improvements.
- The Minera Yanaquihua approach to integrate artisanal production into its operations using local artisanal miners, combined with the use of the RJC Code of Practices, is positively impacting the livelihoods of artisanal miners within and outside the company's concession. This approach, where local artisanal miners can work as ore suppliers to the company in return for seeking formalisation and applying improved social and environmental practices, with the company's financial and technical support, has been increasing the company's production and reducing its risks. It has also been improving the livelihoods of artisanal miners through more responsible and effective mining practices.
- Women empowerment is a positive side effect of the livelihood improvements obtained through the company's approach to engage and work with women artisanal miners and the initiatives to foster local development.
- Recognition of the ICMC by the RJC is an important example of interoperability.
- More investment needs to be undertaken to improve the market for certified gold and increase uptake throughout the gold supply chain to add incentives to mining activities, such as a premium price paid by the market for certified gold, co-financing and access to low-rate loans.

1. Introduction

Over the past decade the mining industry has attempted to strengthen their corporate policies, increase their engagement with government, civil society and community actors, and improve their professional capability to respond to environmental and social challenges. But doubt still persists in the minds of those outside the minerals industry about the authenticity of such change. There is also increasing concern from civil society actors about the dramatic shifts in the scale, technology and location of mineral developments. Certification schemes are increasingly being used by mineral companies and governments as a tool to demonstrate that they are operating responsibly. Some schemes may also be used by civil society actors to hold mineral companies and governments to account. But doubt still persist about their impacts.

This applied research project investigates the potential role sustainability certification schemes can play to improve standards for responsible mining. The research project will assist civil society, businesses, scheme representatives and governments to ensure that such initiatives lead to improvements in the performance of the minerals sector.

The specific objectives of the project are to:

- identify the full range of planned and operational schemes applicable to the minerals industry and their supply chains, and compare their design characteristics such as objectives, focus, process for standards development and operation of such schemes.
- analyse the effectiveness of different design characteristics of schemes, and the collective effectiveness of schemes in the minerals industry as a whole.
- undertake in-depth analysis and fieldwork to consider the relationship between design characteristics and scheme outcomes.
- produce guidance material that captures the findings from all of the above, to support mineral operations, assurance providers, standards organisations, civil society groups, investors, and resource communities to improve practice and outcomes.

The project uses a mixed-method research approach involving three consecutive stages: (i) desktop analysis[2]; (ii) semi-structured interviews[3]; and (iii) field research (case studies). This report refers to the third stage (Phase III) of this research project, which involves field research (case studies) in two selected certified mining sites.

This report begins by outlining the methods used during the third stage of this research project. Section 2 provides a description of the first case study, describes its results and provides a conclusion. The last section concludes the report providing information about the second case study.

[2] The desktop analysis phase of this research project is available at: https://www.csrm.uq.edu.au/publications/designing-sustainablity-certification-for-greater-impact-an-analysis-of-the-design-characteristics-of-15-sustainability-standards-in-the-mining-industry.

[3] The interviews phase of this research project is available at: https://www.csrm.uq.edu.au/publications/designing-sustainability-certification-for-greater-impact-perceptions-expectations-and-recommendations-in-sustainability-certification-schemes?thanks=publication&thanks=publication&thanks=publication.

1.1 Method

The method employed in the third phase of this research project reflects its primary purpose, which is to illustrate key dynamics and explore the perceptions and ideas of participants in relation to the impacts of sustainability certification schemes on the ground. To do so, two case studies were conducted. The case study method was used because this is the research strategy most suitable for exploring a phenomenon that is not completely understood in order to generate further knowledge about it through in-depth examination. The use of a case study allows for a particular individual, geographic area, program or event to be studied and allows the researcher to understand a real-life phenomenon in depth (Leedy & Ormrod, 2005; Somekh & Lewin, 2011; Yin, 2013).

Two case studies were selected to investigate the impacts of two different schemes on the ground: (1) Mineração Serra Grande in Brazil, certified by the International Cyanide Management Code (ICMC); and (2) Minera Yanaquihua S.A.C. in Peru, certified by the Responsible Jewellery Council (RJC). These case studies were selected to represent different applications of schemes in the mining sector. Comparison of certification schemes for the same commodity and sector was not conducted as the aim of the research is not to compare schemes, but to identify aspects that makes schemes effective. Permission was sought from mining operations to undertake fieldwork at a mining site that has undertaken certification in accordance with the particular standards. Primary data (documents and observations) was supplemented with face-to-face interviews and meetings to triangulate data and ensure that a diversity of perspectives were included. Interviews and meetings were important to obtain participants' perceptions regarding the impacts of the schemes on the ground.

Case studies were conducted through semi-structured interviews, meetings and visits to mining sites. In one of the case studies (case study 2), shadowing the audit process of re-certification was done in order to observe the audit process and evaluate first-hand the impacts of the scheme's requirements and procedures. The semi-structured interviews and meetings were conducted with key participants, representing the two certified companies and external stakeholders' representatives, to understand and explore the impacts of the schemes on the ground.

1.2 Limitations

This report is neither a performance assessment nor an evaluation of schemes. It aims to explore and better understand the impacts of two selected certification schemes considering only participants' points of view. Findings and conclusions are based on and restricted to the analyses and qualitative data obtained during interviews and meetings conducted with participants during the two case studies. No further assessment or tests to guarantee the veracity or quality of the information obtained was undertaken.

We have endeavoured to be objective in our analysis and presentation of the information in order to offer a useful resource to enhance practice in the field of sustainability certification in the mining sector. In addition, due to the type of data used, small sample used and limited number of participants, descriptive statistical analyses in this report must be carefully interpreted and could not be generalised to a broader context based on this research project alone.

This report is based on and restricted to the analyses of responses from participants interviewed, and it has limitations. Also, results are based only on participants' ideas, perceptions and expectations, which may not

reflect the participants' actual views. Sometimes participants may provide responses to satisfy the researcher's expectations, or they may not wish to expose details about problems (Appleton, 1995; Opdenakker, 2006). It is also important to highlight that the majority of the participants interviewed during the Mineração Serra Grande Case Study were internal stakeholders (AngloGold Ashanti's employees). These participants might have provided biased statements because of the employment relationship, which might have impacted the findings presented in this report.

Interpretation of meaning is the core of qualitative research, and limitations regarding this matter should also be noted in this report. Data obtained during the fieldwork were provided by participants in Portuguese and Spanish, and findings are provided in English. As translation is also an interpretive act, it is important to highlight the potential threats to validity the translation processes pose (Van Nes, Abma, Jonsson, & Deeg, 2010).

Findings presented are based only on two case studies, in a specific sector and restricted in geographic and thematic scopes, which limits the capacity to draw conclusions on the attribution of the impacts identified to the ICMC and RJC certifications at a more general level and to generalise results. This research employed a qualitative approach aiming only to explore and improve understanding of the impacts of two selected certification schemes rather than to draw conclusions and generalise results with statistical significance.

2. Case study 1: Mineração Serra Grande

This section describes the context of case study 1 and presents findings considering the research project's goals.

2.1 Mineração Serra Grande

Mineração Serra Grande is a gold producer located in the city of Crixás, central Brazil, in the state of Goiás (Figure 1). Crixás is a municipality with an estimated population of 16,695. Its economy is based on mineral mining (gold, manganese and talcum) and milk production[4].

Figure 1: City of Crixás

Serra Grande is one of two AngloGold Ashanti operations in Brazil and it comprises three mechanised underground mines: Mina III, Mina Nova (which includes the Pequizão orebody) and Palmeiras, and an open pit on the outcrop of the Mina III orebody (Figure 2). One dedicated metallurgical plant treats all ore mined. The annual capacity of the processing circuit, which has grinding, leaching, filtration, precipitation and smelting facilities, is 1.15Mt. Serra Grande production represents around 2.5% of the total AngloGold Ashanti Group production and 10% of the total Americas region production. The current life of the mine ends in 2023 and exploration efforts are in place to extend it. The total number of employees at Serra Grande is 1081, 260 of which are contactors (AngloGold Ashanti, 2012).

[4] http://cidades.ibge.gov.br/xtras/perfil.php?lang=&codmun=520640&search=||infogr%E1ficos:-informa%E7%F5es-completas accessed 24th May 2016.

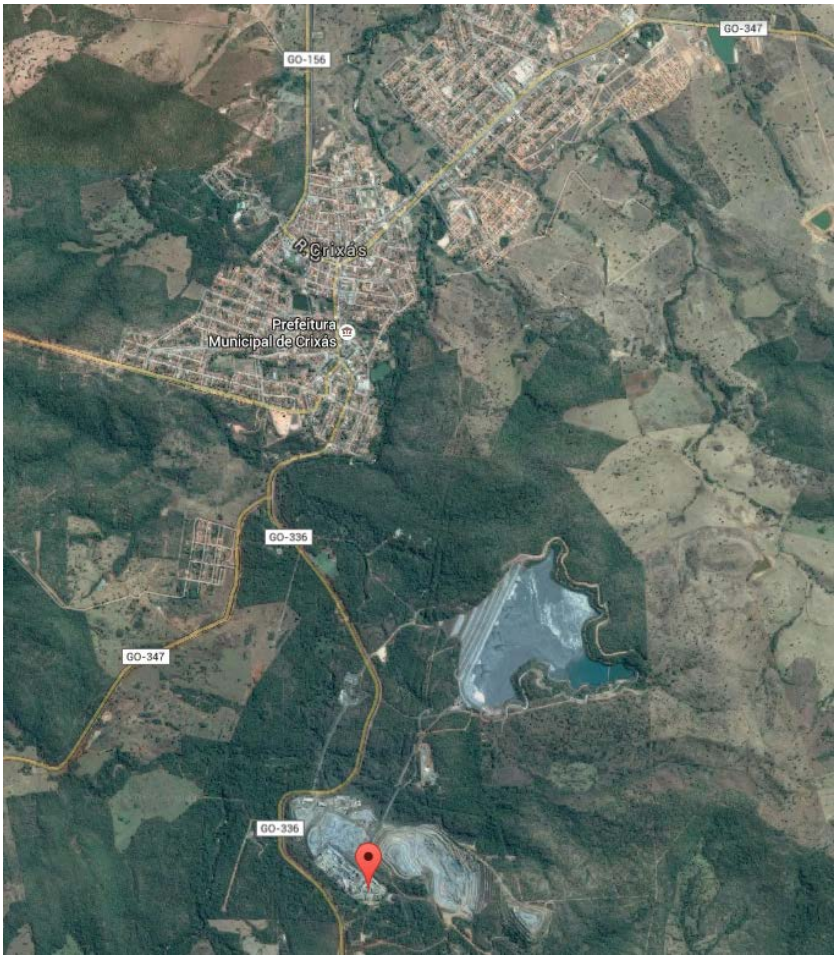

Figure 2: Aerial view of Mineração Serra Grande and the city of Crixás (Source: Google Earth, 6/6/2016, -14.574675, -49.968222)

Serra Grande is wholly owned by AngloGold Ashanti and currently holds ISO 14001, ISO 9001 and ICMC certificates. The mining site was initially certified by the ICMC in February 2009 and the latest re-certification audit process was conducted in November 2015, resulting in a new certificate issued in May 2016 (AngloGold Ashanti, 2012, 2013).

2.2 The International Cyanide Management Code

The ICMC is a voluntary certification scheme operated by the International Cyanide Management Institute since 2003. It is intended to complement an operation's existing regulatory requirements and focuses exclusively on the safe management of cyanide that is produced, transported and used for the recovery of gold, and on mill tailings and leach solutions. It includes requirements related to financial assurance, accident prevention, emergency response, training, public reporting, stakeholder engagement and verification procedures.

Gold mining companies with either single or multiple operations, and the producers and transporters of cyanide used in gold mining, can become signatories to the ICMC. By becoming a signatory, a company commits to following the ICMC's principles and implementing its standards of practice, and signatories' operations will be audited by an accredited and independent third party to verify their operation's compliance with the ICMC.

2.3 Findings

The visit to the mining site began on 9 November 2015 and finished on 12 November 2015. During the site visit, 15 participants were interviewed, being 11 company representatives, two third-party auditors, one local community representative and one local government representative. During the site visit, shadowing of the audit process for re-certification of the ICMC was also conducted to better understand the impacts of the audit process considering the scheme's requirements and procedures. Participants were asked to provide their opinion about what the impacts of the ICMC are.

During the interviews these 15 participants provided 85 comments regarding the impacts of the ICMC on their work activities, on the company's operations and on local external stakeholders. These 85 comments were divided in 56 internal impacts and 29 external impacts. Internal impacts, in general, refer to the impacts on the internal processes and operations of the company while external impacts generally refer to the impacts on the local communities affected by the mining operation.

2.3.1 Internal impacts

Participants provided 56 comments in relation to the internal impacts of the ICMC. These 56 comments were separated into eight different categories: Reputation, Management Systems, Local Community Engagement, Risk Management, Social Licence, Capacity Building, Productivity and Cost Reduction, and Budgeting. Table 1 summarises the internal impacts stated by participants.

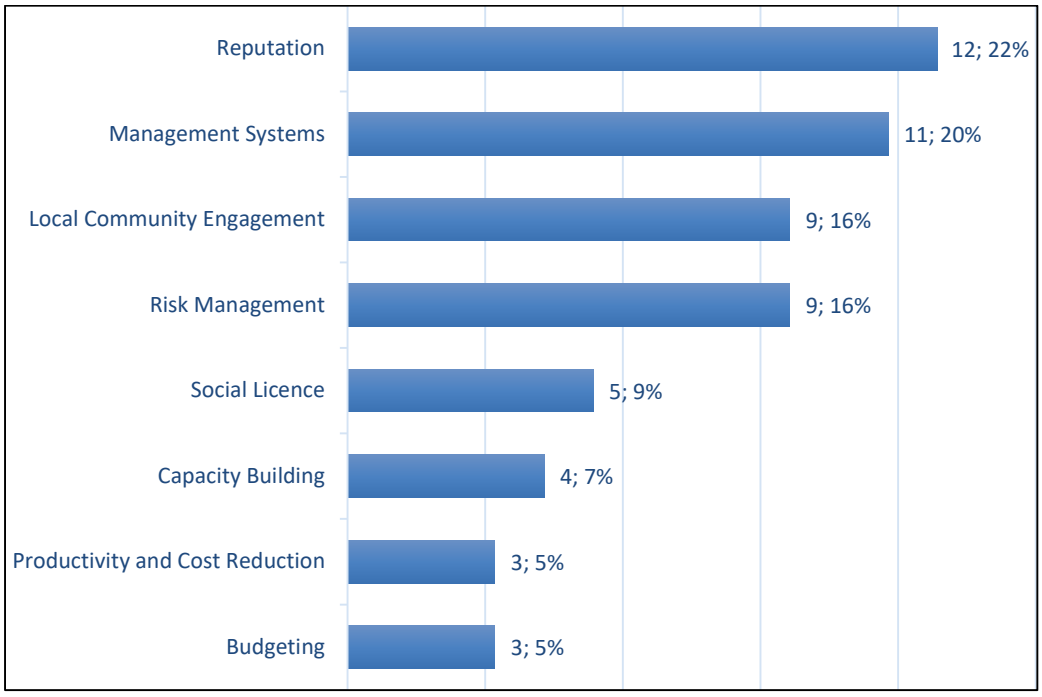

Table 1: Internal impacts

Improving the company's reputation with communities was indicated as the main internal impact of the ICMC (12 comments addressed reputation; which represent 22% of the total of comments provided in relation to the internal impacts of the ICMC). Some commented that certified organisations have a better reputation with their stakeholders compared to organisations that do not have certification. For instance, one participant commented:

"If you have money to decide to invest between two companies; one has a certificate, the other does not. You will invest in the certified one because you know someone went there and assured that this company is operating responsibly." (Participant 4)

Also, according to this participant, a good reputation has the capacity to reduce negative effects. This participant stated:

"Even in a situation where you have a real problem, if you have a good reputation the impact of this problem is automatically reduced." (Participant 4)

In the same vein, Participant 9 stated:

"The summary of the audit report is publicly available on the ICMC website. This is a guarantee that the company has effective controls over its processes to manage their operations. It guarantees that this company applies the ICMC protocols and manages properly the transport, use, storage and final disposal of cyanide." (Participant 9)

It is interesting to note that, according to this participant, the transparency of the ICMC in regards to the results of the audit process – in this case the public availability of the summary of the audit report on the ICMC website – improves both the certification scheme's and company's reputation. Additionally, comments associated the initiative of the company to obtain a voluntary certificate – in this case the ICMC – with an improvement in the company's reputation. A voluntary certificate demonstrates that the company goes beyond the legal requirements to improve their performance. In some of the participants' words:

"The cyanide code certificate has a direct positive impact on our reputation. It demonstrates our commitment to be a more responsible company. It is not about saying we operate responsibly, it is about demonstrating we operate responsibly." (Participant 14)

"It [ICMC certificate] improves our reputation because it is a well-recognised international entity. Even more because it is a voluntary initiative. It gives a good weighting to the company and demonstrates our commitments." (Participant 15)

"The market will recognise that you are a good performer if you hold the ICMC certificate. When you are not certified by the ICMC, people will not trust you as much. Cyanide is a serious thing and everybody wants to know if you are operating with responsibility." (Participant 4)

"The ICMC is an international certification scheme and, as such, the mining sector as a whole recognises that organisations certified by the ICMC operate with more responsibility." (Participant 8)

Similar statements were provided by community representatives. These participants also associated the company's reputation with the ICMC certificate, as the following quotes suggest:

"This certification makes me feel a bit more relaxed. It demonstrates that the organisation has safety procedures and its employees are trained to deal with cyanide." (Participant 12)

"When the organisation seeks a certification, in this case a cyanide certification, it means that the organisation is keen to improve its practices. As a result we can be a little bit calmer." (Participant 13)

Results obtained demonstrate that both internal and external stakeholders associate the company's decision to obtain and maintain a voluntary sustainability certificate with a commitment to good governance and

responsible operations. According to participants, such a certificate demonstrates that the company goes beyond legal requirements in regards to economic, environmental and social challenges. A better reputation was also attributed by participants to international and well-recognised schemes, as well as to schemes with a transparent and accountable approach.

Improvements in management systems and internal control structures was the second-most mentioned internal impact (11; 20%). According to participants' points of view, to be in compliance with the ICMC and receive the certificate, the company needs to improve their health, safety and environmental management systems. Regarding this matter, some of the participants pointed out:

> *"We had to improve our health, safety and environmental management systems to be in compliance with the ICMC. There was a general improvement in the way we manage not only cyanide but all hazardous substances. I have the same management system to deal with all hazardous substances. So, if I had to improve my system to receive the cyanide code certificate, it means I am now managing better other hazardous substances." (Participant 11)*

> *"The whole certification process has an extreme positive impact in my operations. It allows us to better manage the use of cyanide. The cyanide code helps to anticipate problems through internal control mechanisms." (Participant 14)*

> *"There are some internal controls that were initially developed to attend to cyanide code requirements, but now we are using the very same controls in other processes." (Participant 4)*

Improvements in internal controls and management systems were not the only topics mentioned by participants. According to some participants, the organisational structure is more efficient and the work dynamic is better in certified companies. Regarding this matter, Participants 8 and 10 stated:

> *"Certified organisations are different. You can see they have a different level of organisation. A certified organisation has management tools and mechanisms in place and has a well-defined organisational structure. Certified companies have documents, processes and responsibilities defined and so on. No doubt certified companies are more efficient." (Participant 8)*

> *"The ICMC helps with our controls and management systems. It [the ICMC] says I have to have monitoring activities in place addressing specific aspects of water quality, effluents and waste management. These monitoring activities are now embedded in our environmental management systems." (Participant 10)*

Comments also mentioned improvements in the company's engagement process with local communities as a result of compliance with ICMC requirements (9; 16%). According to some of the participants, the ICMC has an important requirement focused on communication and engagement with stakeholders. This pushes organisations to have effective communication mechanisms and community engagement processes in place. For instance, some of the participants stated:

> *"Because of the cyanide code we had to develop and implement an emergency response plan including the local community. Actually, an emergency response simulation was conducted for the first time this year and different stakeholders were involved." (Participant 11)*

> *"Talk with the community about cyanide was taboo in the past. We did not talk with the community about it at all. The ICMC helped to change this mindset… The ICMC helped us to improve our relationship with*

local communities. We are now closer to the community and openly discuss our impacts, including the use of cyanide. In the past we feared engaging and talking with local communities." (Participant 14)

Similarly, Participant 3 mentioned this paradigm of not clearly communicating and not properly engaging with community representatives to talk about sensitive topics, such as the use of cyanide. This participant provided a statement explaining the importance of the ICMC in breaking down these communication and engagement barriers. In this participant's words:

"In the beginning, when we decided to go ahead with the ICMC, this [communication and engagement with local community requirements] is what generated more discomfort. We questioned ourselves, 'Should we go or shouldn't we?' After a while we realised that this is actually a good and important practice." (Participant 3)

The same participant also stated that the ICMC played an important role in highlighting to the company the importance of the engagement process and communication with local communities. This participant stated:

"The cyanide code has a principle saying that the local community should be engaged. It is a company's responsibility to inform the local community about the risks involved and how these risks are managed. So, to attend to this principle we had to improve our communication channels with the local community and implement some programs to clearly inform community representatives about the cyanide." (Participant 3)

When asked about the relationship between the company and the local community over the last few years, one of the community representatives stated:

"The relationship now is much better. It has improved a lot. Now they [company representatives] invite us to visit the company. They are actually engaging with local leadership and explaining the risks involved with cyanide and what should be done in a situation of emergency." (Participant 13)

Nine comments (9; 16%) addressed the potential for the ICMC to help the company to manage risks better. According to these comments, the certification scheme plays an important role in facilitating the company to identify, understand and manage its risks. For example, two participants stated:

"The ICMC improves the risk management approach of different internal processes; for example, health and safety of our employees and contractors and environmental aspects that could impact our community." (Participant 8)

"The cyanide code improved our risk management approach. The company already had in place controls to mitigate its risks, but the cyanide code helped to improve these controls." (Participant 7)

Six out of the nine comments about risk management addressed specifically the role played by the ICMC in helping the company to manage risks associated with the cyanide supply chain. One of the participants, for instance, stated that the ICMC reduces the risk of accidents during the transport of cyanide because certified companies are allowed to contract only certified transporters. This participant said:

"The risk of accidents is hugely mitigated with the cyanide code. We operate only with certified transporters. This is good because we know that the certified transporters, to have their certificates, had to operate and be in compliance with the very same best practices we did to obtain our certificate." (Participant 1)

A similar statement was provided by another participant:

"The ICMC protocol works with risk management. We have seen the whole cyanide transport process improve – from the cyanide producer to the cyanide transporter and from the cyanide transporter to us." (Participant 8)

Participant 9 also clearly mentioned that the ICMC addresses the whole supply chain including cyanide producers, cyanide transporters and mining companies, which contributes to better risk management throughout the supply chain. This participant stated:

"The whole supply chain needs to be certified. The producer, the transporter and the mining company have to be certified. This is a good example of an integrated risk management approach." (Participant 9)

The social licence to operate[5] was also cited during the interviews. Five comments mentioned that the ICMC helps the organisation to obtain the social licence to operate. According to these comments, the ICMC has specific requirements related to community dialogue, which improves the relationship between the company and the local community. This relationship improvement, according to some of the participants, is helping the company to obtain its social licence to operate. For example, regarding this matter, Participants 5 and 6 stated:

"There is the social licence to operate impact. Cyanide is surrounded by heavy discussions everywhere. In fact, because of the ICMC we had to explain to the community what cyanide is, why they need to know about it, what controls we have in place, what the risks are, in a situation of emergency what should be done, and so on. This communication improved our relationship with the local community." (Participant 5)

"I believe it [the cyanide code] makes this link between us and the social licence to operate. Our employees and community representatives are now more aware about our operations. They know we have this certification. It adds value and calms the community." (Participant 6)

Four comments (4; 7%) addressed the potential for the ICMC to help organisations improve capacity building. According to these comments, certification schemes play an important role in strengthening the competencies and skills of employees. The improvement in employees' skills to manage the risks associated with cyanide was mentioned several times, for example:

"Because of the code we now have people highly prepared to deal with cyanide. I mean, we have employees well trained to manage any situation." (Participant 9)

Comments indicating that the ICMC positively affects productivity and helps to reduce costs were made three times (3; 5%). Competition and globalisation has forced organisations to look at new opportunities to improve productivity and reduce their costs. In this context, schemes can guide and/or foster companies to adopt and implement initiatives to improve productivity and reduce costs. When asked about the influence of the ICMC in this context, Participants 5 and 8 stated:

"It [ICMC] influences my operations, my internal controls and the knowledge of my employees. As a result, productivity increases." (Participant 5)

"Cyanide is not cheap. So, when the cyanide protocol addresses operational and production aspects, it forces organisations to adopt new strategies to improve practice and be more productive." (Participant 8)

[5] The "social licence to operate" concept governs the extent to which an organisation is constrained to meet societal expectations and avoid activities that societies (or influential elements within them) deem unacceptable, whether or not those expectations are embodied in law (Gunningham, Kagan, & Thornton, 2004).

Regarding cost reduction, Participant 5 stated that the ICMC played its part in influencing the organisation to find new alternatives to reduce the use of cyanide in its operations. Item 6.1 of the cyanide code states that certified organisations need to take measures as necessary to eliminate, reduce and control potential cyanide exposure scenarios (International Cyanide Management Institute, 2009). Regarding this matter, this participant said:

> *"In order to reduce exposure scenarios we changed some procedures. Part of these changes were done because of the ICMC. As a result, the exposure scenarios were reduced as well as cyanide consumption, which had a positive economic impact." (Participant 5)*

A similar point of view was provided by Participant 7 when asked about the importance of the ICMC initiative implemented recently to reduce the quantity of cyanide used, thus reducing costs. This participant stated:

> *"Our company was already looking for cost-reduction initiatives, and the ICMC came and contributed with that." (Participant 7)*

Helping managers obtain financial resources to maintain the cyanide code and implement improvement opportunities was also considered one of the internal impacts of the ICMC. Three comments (3; 5%) considered the ICMC very useful for managers to obtain and defend their budgets. When asked about the importance of the ICMC in helping to obtain financial resources to prepare his budget, Participant 10 said:

> *"The cyanide code audit process helps me to obtain resources. If there is a non-compliance situation and I need resources to develop and implement an action plan, the audit report will support my action plan and definitely will help me to obtain the resources I need." (Participant 3)*

Similarly, Participant 11 stated:

> *"The company knows that the certification is important and it's also important to keep the certification. We know that the certification has a cost. If we want to be certified, we need resources. In this context, the certification helps to obtain resources for my budget." (Participant 11)*

2.3.2 External impacts

Participants provided 29 comments in relation to the external impacts of the ICMC. These comments were separated into three different categories: Community Awareness, Better Management of Impacts, and Capacity Building. Table 2 summarises the external impacts mentioned by participants.

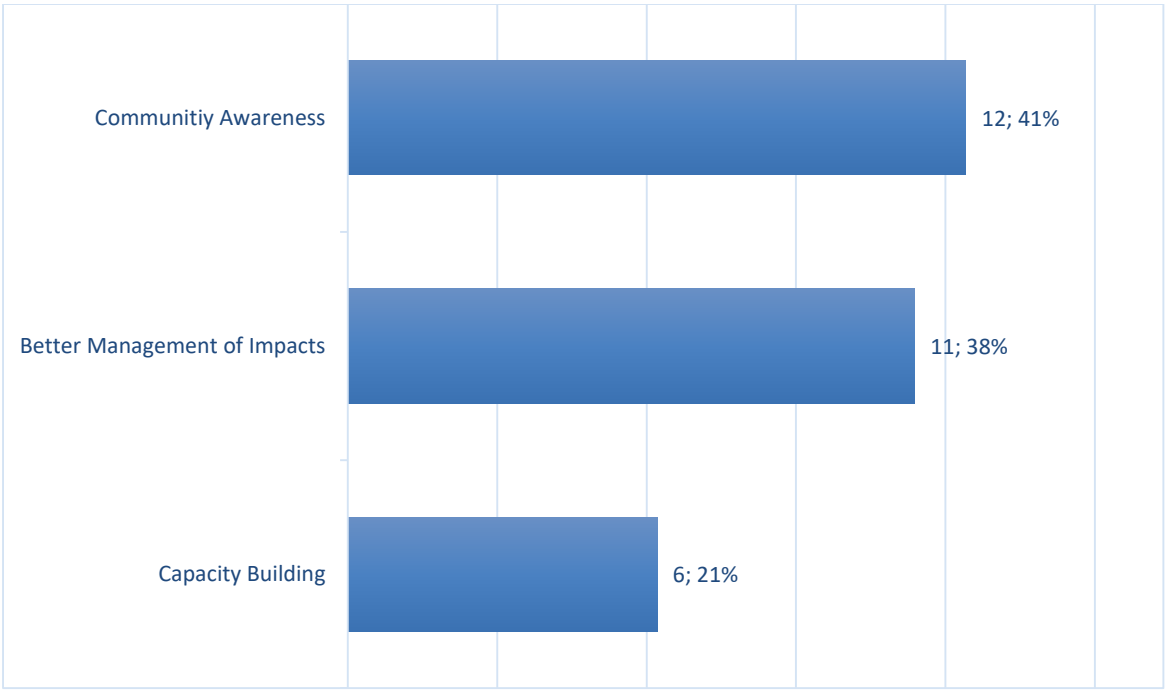

Table 2: External impacts

Improving community awareness in regards to health, safety and environmental issues was indicated as the main external impact of the ICMC (12; 41%). Some commented that the ICMC requirements, to engage and communicate with community about the cyanide impacts and their management procedures, improved the knowledge of the community regarding these issues. For instance, two participants commented:

> *"Because we have the cyanide code certificate we need to be regularly in contact with community representatives. They are also here! We have a program where community representatives come over to see our operations and understand the impacts associated with our activities. It is also an opportunity for them to clarify any queries they might have. We explain our operations and we talk openly about the cyanide. It is important to demonstrate and explain to them that, yes, we have cyanide, yes, we use cyanide, but we control it." (Participant 10)*

> *"We have a closer relationship with our community now. They contact us when they have questions. We talk about cyanide and we talk about health and safety issues. This approach improves their general understanding on cyanide and on environmental and safety issues." (Participant 15)*

A community representative explained that the involvement of community representatives during the development and implementation of the emergency response plan improved their understanding about the risk of cyanide. In this participant's words:

> *"I did not know anything about cyanide and even the existence of a cyanide certification scheme. They [company representatives] simulated an accident with cyanide and we were there watching and*

participating. There were only a few people there, but you know that those few people can replicate what they saw." (Participant 12)

Better management of impacts was also considered one of the external benefits of the ICMC. Eleven comments (11; 38%) considered that the ICMC improved the management of environmental and health and safety risks within the community. For instance, regarding this matter, Participants 1, 3 and 10 commented:

"The potential risk of a cyanide accident during transport has been significantly minimised!" (Participant 1)

"The way we manage our waste today is different. It is better now, and this improvement has an immediate positive impact on the local community of Crixás." (Participant 3)

"Our monitoring programs to evaluate the effects of cyanide use on surface and ground water quality have improved. We had to improve some aspects of our systems to receive the certificate. For example, the ICMC drove us to improve our water balance[6]." (Participant 10)

These statements, provided by internal stakeholders, support the idea that the risk management systems used by the company to manage environmental and health and safety risks, not only inside the company but also outside, improved. Aspects such as transport of cyanide, waste management and water quality can have an enormous impact on the local community.

A similar comment was provided by a community representative. This participant stated that the certificate brings an external assurance that the company is properly managing its social and environmental risks. This participant stated:

"A certified company means that the company is concerned with its risks and wants to operate with responsibility. Such a company does not want to impact local communities, neither with environmental nor with health and safety issues." (Participant 13)

The ICMC's capacity to work as an instrument of capacity building for local community representatives was cited as an external impact (6; 21%). The ICMC requires that certified companies need to provide training and prepare detailed emergency response plans for potential cyanide releases, involving not only employees but also external stakeholders – train workers and emergency response personnel – to manage cyanide in a safe and environmentally protective manner (International Cyanide Management Institute, 2009). In order to fulfil these requirements, the company needs to develop training programs addressing both internal and external stakeholders. These training programs positively affect different external stakeholders, such as local doctors and nurses, local government representatives, environmental agency employees, local firefighters, local policemen and community leaders. Regarding this matter, some of the participants stated:

"The firefighters here do not have the financial resources to simulate a situation of emergency. They do not have equipment and specific training to deal with a cyanide situation of emergency. So, we are actually doing everything and training these guys… We trained not only our employees and contractors to understand the hazards associated with cyanide use and how to respond to exposures or releases of cyanide, but we trained the local hospital staff and the local fire brigade." (Participant 14)

[6] Water balance is the ratio between the flow of water in and the flow of water out of a system.

"The health and safety unit of the company provides training for local doctors and nurses so these professionals can act during a situation of emergency. This health and safety unit also conducts compliance audits in the local hospital." (Participant 8)

Capacity building was enhanced and fostered through training programs addressing specific groups of stakeholders. Indirect training and competency enhancement were also provided during the community engagement processes and during the development, management and testing of the emergency response plan. For example, regarding this matter, Participants 3 and 6 pointed out:

"We simulated a cyanide transport incident on the road as part of our emergency response plan, and we invited a lot of stakeholders to attend. These stakeholders were part of the emergency response plan, and as a part of this plan, they needed to receive appropriate training to respond to that situation of emergency." (Participant 3)

"The ICMC requires a proper engagement process with local community representatives and an emergency response plan in place. Because of these initiatives, I believe our community is more prepared to deal with a situation of emergency or an incident." (Participant 6)

2.4 Case Study 1 Conclusion

During the fieldwork we identified that participants have similar opinions about the impacts of the ICMC. Comments received addressed internal and external impacts. Most comments referring to internal impacts addressed the improvements in the company's reputation through the use of an international and well-recognised certificate, in this case (according to the participants), the ICMC. Results demonstrate that accountability and transparency are fundamental parts of a credible certification scheme, and this also improves its legitimacy. During the fieldwork, a link was observed between the program's transparency, especially in regards to the assurance process, and its reputation. Also, it was observed that the reputation of the ICMC stated by participants has a direct influence on stakeholders' perceptions about the company's own reputation.

Improvements in management systems and risk management strategies were also highlighted as internal positive impacts. Comments also emphasised an enhanced relationship with the local community as a result of the need to have an effective stakeholder engagement program in place to fulfil the ICMC's dialogue and stakeholder engagement requirements. Obtaining the social licence to operate, strengthening abilities and competencies of employees and contractors, increasing productivity, reducing costs and helping management teams to obtain internal financial resources to maintain the ICMC certificate and to improve their operations were also mentioned by participants, to a lesser extent, as internal impacts.

Moreover, participants observed the importance of a high quality audit process, not only to demonstrate the credibility of the certification scheme but to improve practices. Qualified and accredited auditors, a transparent audit process with audit reports publicly available, an audit quality review performed by the scheme's representatives, an audit follow-up structure in place to maintain traceability of the company's performance, process changes, and action plans addressing audit recommendations over the years, were considered crucial components of an effective and credible certification scheme. Clear guidelines about requirements and straightforward indicators were also considered key features of certification schemes to deliver positive impacts on the ground and increase uptake.

The ICMC requirements to train workers and personnel to operate cyanide and respond to exposures and releases of cyanide, allied to the requirements to communicate and engage with stakeholders, were considered important to improve the awareness of different stakeholders in relation to the use of cyanide and its impacts, especially local community representatives. These requirements were also believed important to foster community capacity building.

In conclusion, although the impacts presented in this section were indicated by participants to the ICMC, through the research method employed it is not possible to identify whether these impacts could be attributed entirely to the certification scheme under assessment or to other factors, such as the company's corporate social responsibility initiatives or other applicable local regulations. We suggest a more robust and extensive research method to undertake in-depth analysis to further explore and measure the impacts on the ground that are directly attributable to the ICMC. In addition, it is important to mention that an emergency response simulation, involving different stakeholders, was conducted by the Mineração Serra Grande before the visit to the mining site, which may have also affected participants' perceptions in relation to internal and external impacts presented in this case study.

3. Case Study 2: Minera Yanaquihua

This section describes the context of case study 2 and presents findings considering the research project's goals.

3.1 Minera Yanaquihua S.A.C.

Minera Yanaquihua S.A.C. is a gold producer in Peru, located 160 kilometres northwest of the city of Arequipa in the district of Yanaquihua and 10 kilometres from the village Yanaquihua. The district of Yanaquihua has an estimated population of 4,936[7] and its economy is based on agriculture and mineral mining (gold and silver)[8].

Figure 3: District of Yanaquihua

Minera Yanaquihua joined the RJC as a member in 2012 and was the first Peruvian mining company certified against the RJC Code of Practices. Its certificate was received in August 2014 and expires in August 2017. In addition to its underground mines, Minera Yanaquihua maintains a commercial relationship with artisanal miners operating within its concession area. Artisanal miners represent about 30% of Minera Yanaquihua's production, which was measured at 30,000 ounces in 2015. It has 88 employees and 434 contactors, and maintains a relationship with about 700 artisanal miners (Jeude, Bender, León, Valásquez, & Plomp, 2015).

[7] http://venio.info/pregunta/cuantos-habitantes-tiene-yanaquihua-provincia-de-condesuyos-arequipa-19112.html accessed 13th June 2016.

[8] http://www.perutoptours.com/index04con_condesuyos.html accessed 13th June 2016.

Figure 4: Aerial view of Minera Yanaquihua (Source: Google Earth, 13/6/2016, -15.781.860, -72.924604)

Minera Yanaquihua has a processing plant with two metallurgical circuits, which treats approximately 130 Tons of ore per day from its mines and artisanal miners, which work within the concessions of the company and sell its production. The mine currently has four areas: Cerro Rico, Esperanza, Consuelo and Pechugon. Communities of ASM miners existed on the land prior to the Minera Yanaquihua operation. In the past there has been a tense co-existence, at times flaring into violent conflict between the former owners of the mine and the ASM miners on the concession (Responsible Jewellery Council, 2014).

3.2 Responsible Jewellery Council

The Responsible Jewellery Council (RJC)'s Code of Practices is a standard applicable to RJC member companies. RJC has member companies operating across the whole jewellery supply chain, from mine to retail. Certification is undertaken at the corporate level of individual firms, which may operate at any portion of the supply chain, and the certification is not specific to a particular facility nor does it necessitate that the company operate across the full supply chain. The first RJC Code of Practices was formally adopted by the RJC board in 2006. The RJC has developed the RJC Member Certification system which applies to all members' businesses that contribute to the diamond, gold and platinum metals jewellery supply chain. All members must obtain certification within two years of joining the RJC, and the Code of Practices is made up of the following core elements: general requirements (legal and regulatory compliance, reporting); responsible supply chains and human rights; labour rights and working conditions; health, safety and environment; gold, diamond and platinum group metal products (disclosure and controls for information); and responsible mining (increase the implementation of responsible exploration and mining practices).

All certified members of the RJC are audited by accredited third-party auditors to verify their conformance with the RJC's Code of Practices. A voluntary Chain-of-Custody standard has also been developed for gold and platinum group metals. The RJC is a Full Member of the ISEAL[9]. The case which we studied of the RJC code of

[9] International Social and Environmental Accreditation and Labelling Alliance (ISEAL) is a not-for-profit organisation aiming to define and communicate good practices for sustainability standards. ISEAL full members are sustainability standards that demonstrate a high level of compliance with ISEAL's Codes of Good Practice.

practices implementation in Peru is a novel partnership with a non-profit organization called Solidaridad, which assisted in the improvement of practices and relationship of artisanal miners with the mining company.

3.3 Findings

The visit to the mine site began on 2 December 2015 and finished on 6 December 2015. During the site visit seven company representatives were interviewed, one NGO representative was interviewed and seven meetings with local community representatives and artisanal miners were conducted. During interviews and meetings with stakeholders, 85 comments regarding the impacts of the RJC were provided. These 85 comments were divided into 41 internal impacts and 44 external impacts. Internal impacts, in general, refer to the impacts on the internal processes and operations of the company while external impacts generally refer to the impacts on the local communities affected by the mining operation.

3.3.1 Internal impacts

Participants provided 41 comments in relation to the internal impacts of RJC certification. These 41 comments were separated into seven different categories: Stakeholder Engagement, HSE Performance, Management Systems, Regulation Compliance, Reputation, Capacity Building, and Access to Market. Table 3 summarises the internal impacts stated by participants.

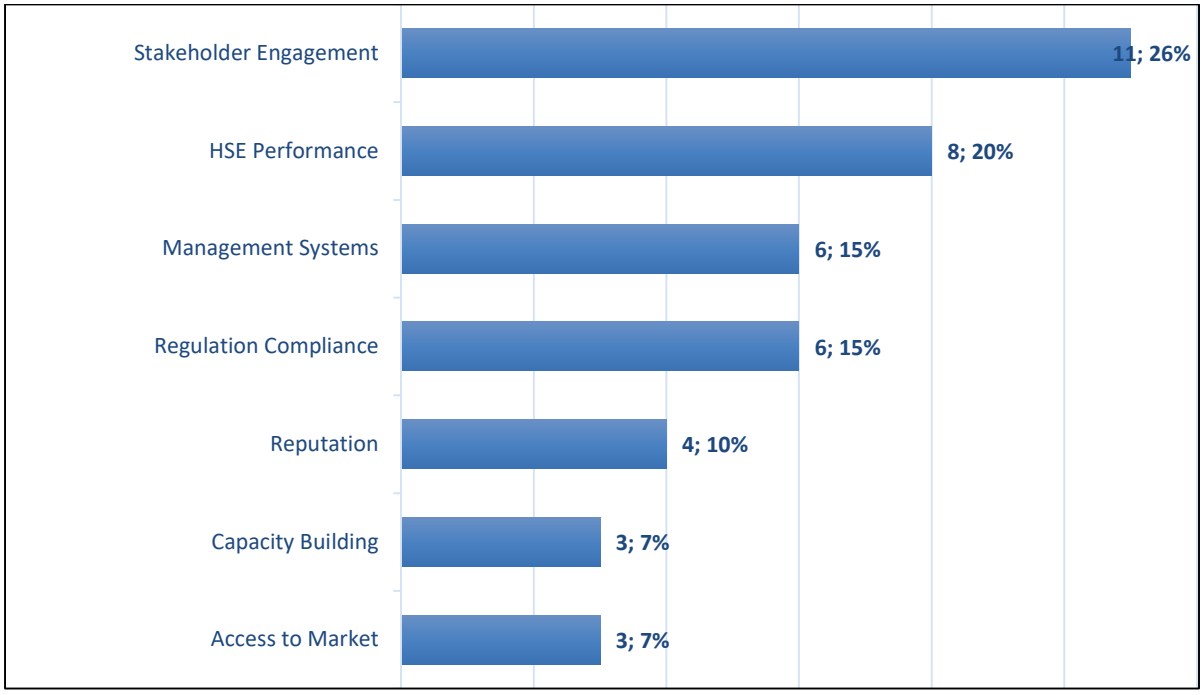

Table 3: Internal impacts of the RJC

Better stakeholder engagement was the most commonly mentioned internal positive impact (11; 26%). According to participants interviewed, the RJC's community engagement requirement provided guidelines on an effective engagement process. To meet this criterion the RJC guidelines recommend that a communication process should be in place, sharing information and managing community concerns and priorities (Responsible Jewellery Council, 2013a, 2013b). Regarding this matter, Participant 2 stated:

> *"We had to improve many issues to be certified. For example, the communication with local community representatives. I can tell you that now we have a much better relationship with communities, and the*

certification scheme played an important role in this context providing the framework to better engage and communicate with local communities." (Participant 2)

A similar statement about the important role the RJC plays in helping the company to improve its approach to engaging with the local community was also provided by Participant 3. This participant stated that the certification provided recommendations and guidance on how important it is to engage with and listen to the community. RJC has specific requirements for its members to engage with artisanal miners. Alongside other schemes, it also has requirements to engage more broadly with affected communities, throughout the project's lifecycle, and seek support of community initiatives. In this participant's words:

"The certification scheme pressured and guided us to improve our relationship with local communities. There is now better communication with our local communities, not only to tell them what we are doing but also to listen to their concerns." (Participant 3)

Improvements in the company's communication and engagement processes with other stakeholders, such as local artisanal miners and authorities, was also discussed. Regarding the relationship with local artisanal miners, Participants 2, 3 and 7 said:

"The RJC taught us that we need to equally treat and engage with our stakeholders. Now we engage with different stakeholders in the same manner." (Participant 2)

"The certification pushed us to improve our relationship not only with local community representatives but also with the artisanal miners that are mining here. Our relationships with artisanal miners are much better now. We already established a communication channel with them. Of course there are points of disagreement, but we have a communication channel in place now." (Participant 3)

"One of the impacts of the RJC is a better relationship with community, artisanal miners and authorities. Local authorities see our certification as a positive thing." (Participant 7)

Similar comments were provided by stakeholder representatives engaged during the field work. In five out of the seven meetings conducted with local community representatives and artisanal miners, the improvement in communication between the company and stakeholders was mentioned. Some of the stakeholders also cited that they feel respected with the current way the company is conducting their engagement process with stakeholders. For example, one of the stakeholders said:

"Now we know who we have to call and how we can contact the company when we have concerns. Our relationship with the company has improved a lot in the last two years." (Participant 13)

Although communication improvements were mentioned several times, two external stakeholders recognised that despite the situation being better, there is still room for improvement. These improvement opportunities would address the responsiveness of the company to their queries on environmental and local development issues. Regarding these topics, two community representatives commented:

"*We want to receive more information about the environmental monitoring activities, for example. We want to be sure that there is no contamination in our land. There is a lot of dust coming from the mining areas and roads, and they say everything is OK." (Participant 14)*

"More information and support should be provided to foster local development outside mining. We want to know what will be done when the gold price drops and when the mining operation ends." (Participant 9)

An additional complaint provided during the interviews by one of the artisanal miners' groups addressed the results of laboratory tests conducted by the company to analyse the quantity of gold present in the ore produced by the artisanal miners. Artisanal miners working as contractors are paid according to the quantity of gold presented in the ore extracted by them. According to this group of artisanal miners, there are differences in the results presented by the company's laboratory and results presented by a laboratory located in Lima, with the laboratory in Lima providing results more beneficial to artisanal miners. An artisanal miner interviewed for the report noted the discrepancy in laboratory results which has eroded trust:

"Something is wrong. When we send our sample to be analysed in Lima, results are better to us. Lima's results usually show a higher quantity of gold in the sample than the company's results." (Participant 10)

In addition to communication aspects, one of the participants also stated that a good engagement process with stakeholders reduces the risks of conflicts. This participant said:

"The RJC helped us to improve the relationship with our stakeholders, especially the ASM operating in our concession. This improved relationship helps us to avoid conflicts, such as the ones that happen at this very same place with this very same community and artisanal miners." (Participant 5)

Improvements in health, safety and environmental performance was the second-most mentioned internal impact (8; 20%). Participants stated that the RJC helped to improve the company's environmental and health and safety performance. For example, Participants 1 and 4 pointed out:

"The certification influences our work. When I started working here there was not much on health and safety. But when it was decided to obtain the certificate, we had to improve a lot our health and safety performance. The certification brought best practices that improved our social performance as well our environmental performance." (Participant 1)

"There have been significant improvements in the last few years in our safety and environmental performance. There was a huge change in the way we manage our health and safety risks. The work conditions of our employees, contractors and artisanal miners are much better now." (Participant 4)

Minera Yanaquihua has developed a business model based on purchasing ore from local artisanal miners operating on its property. This business model uses the mining–contractor relationship to formalise and improve social and environmental performance of artisanal miners. Regarding this matter, Participants 2 and 3 stated:

"I am sure the RJC helped to improve the company's performance as well as the performance of local artisanal miners. There were a lot of improvements, especially with the local artisanal miners' workplaces, general hygiene, on-site housing and use of Personal Protective Equipment [PPE]. The work conditions and safety of the miners improved a lot." (Participant 2)

"The certification helped a lot. For example, hazardous substances. We always used these substances but only now are we properly managing the use, storage and disposal of such substances. We are following the RJC guidelines." (Participant 3)

Improvements in management systems was the third-most mentioned internal impact (6; 15%). According to participants, RJC certification was not only an incentive for the company to improve its management systems, but also provided the guidance to do so. For example, supporting this statement, Participants 2 and 6 stated:

> *"The certification brought improvements, especially in our management system. Before the certification we did not have a management system, we did not have procedures and policies to manage environmental and social risks." (Participant 2)*

> *"To obtain the certification we had to improve our health and safety performance and our environmental performance. We were already working on these issues, but the certification rose the bar. The certification brought our management systems to another level." (Participant 6)*

Improvements in the internal controls and management systems were not the only topics mentioned by participants. According to some participants, the RJC has a strong component of integration and interoperability between quality, health and safety and environmental systems. It provides guidelines and an integrated management approach through its Code of Practices, regardless of the management system in place. This Code of Practices covers environmental, social, economic, operational and local context aspects. Regarding this matter, Participant 7 stated:

> *"I have been working with ISO 9000, 14000 and OHSAS 18000 for a long time already. Those systems do not consider integration, and this is exactly what RJC does. It integrates everything. RJC was designed in such a way that it integrates all management systems you have in place." (Participant 7)*

Comments from participants also addressed the capacity of the RJC to help the company comply with regulations (6; 15%) – first, because compliance with regulations is a mandatory requirement; and second, because the RJC's guidelines are based on best practices that help certified companies comply with regulations.

The majority of the comments provided regarding regulation compliance addressed the formalisation of artisanal miners. Since 2002, with the promulgation of Law 27651, the "Law of Formalization and Promotion of Small-scale Mining and Artisanal Mining", the Peruvian Government has been developing a national plan to formalise ASM. This plan focuses on regulating the use of surface areas; working legally in concessions belonging to third parties; improving the technique of ASM work; obtaining licences for the use of water; requiring operating agreements with the holder of the concession; acquiring training and cleaner and more efficient technologies for processing; collectively addressing the problems of the mining community; and establishing appropriate environmental and health and safety requirements (Barreto, 2011).

When asked about the role of the RJC in the Peruvian regulations related to the formalisation of artisanal mining, Participants 1 and 7 said:

> *"Well, we can say that some of the RJC's best practices are aligned with the Peruvian regulations related to formalisation of ASM. RJC also says that we have to comply with regulations and the law says that ASM should be formalised." (Participant 1)*

> *"The RJC's guidelines are helping us with the formalisation of artisanal miners. The certification provided us guidelines to engage with miners operating in our area of concession and also provided guidance on environmental, occupational safety and health requirements." (Participant 7)*

Enhancing the reputation of the company was also indicated as one of the impacts of the certification scheme. According to some of the comments provided (4; 10%), the use of the RJC certificate improves the company's reputation with its internal and external stakeholders. Regarding this matter, one of the participants stated:

> *"RJC allows us to be recognised as a responsible mining company. It gives us international prestige. We can say that we are the only Peruvian company certified by RJC. We belong to this small group of mining companies certified by RJC." (Participant 1)*

Participant 5 explained that a good reputation helps to avoid conflict, which has the potential to impact the reputation of the company. In this participant's words:

> *"There were a lot of conflicts in this area in the past, but we don't have such a problem anymore. I can tell you that we have a good relationship with our local community as well as artisanal miners. The fact we have this international certificate also helps us to demonstrate we are operating responsibly. This is not us talking to the community, it is the RJC telling them that we are operating responsibly." (Participant 5)*

When asked about artisanal miners' and community representatives' perceptions of the RJC certificate obtained by the company, one of the participants commented:

> *"Look, I do not think they know much about the certification. This is not something everybody should know. What matters for them is actually a good relationship with the company, and everybody knows that the RJC is improving this relationship. Over the last few years they recognised that some positive changes were made and the certification scheme played an important role in these changes. The certification audit processes and visits from international stakeholders also helped to improve the reputation of the company and the RJC among these local stakeholders." (Participant 7)*

The above comments support the idea that the reputation of the company is improved through the use of an international certification scheme. What is also important to note about these comments is that actions on the ground are also crucial to improving reputation, especially with local stakeholders.

Regarding the audit process undertaken during the certification process, three participants criticised the current audit process. According to these participants, the certification process should have more thoroughly assessed material aspects, such as the formalisation of and relationship with local artisanal miners. Another aspect criticised was the use of an international auditor during the audit process. Participants making this comment suggested that a local auditor would have certainly improved the quality of the assurance process, especially in regards to the local regulations and the local context where the company operates. Regarding this topic, one of the participants stated:

> *"The audit was conducted by an international auditor. He did not have complete knowledge about the local regulations, laws and context, and as a result the audit process was conducted with a lack of knowledge about the local regulations and context. I believe this is a weakness. I believe a local auditor should be included in the audit team or the audit should be conducted by a local auditor so you can have a stronger audit." (Participant 7)*

The contribution of the RJC to capacity building was also mentioned as an internal positive impact. Three participants (3; 7%) stated that the RJC certification scheme plays an important role in strengthening the capabilities and skills of employees and contractors. For example, Participants 1 and 2 cited:

"We had to understand the rules of the game [RJC requirements] and learn about it." (Participant 2)

"The certification influences my work. I learnt a lot about different topics with the RJC guidelines. I did not know much about human rights, for example, before the certification, and now I know." (Participant 1)

Participant 1 also mentioned the importance of having material available in the local language to improve accessibility and capacity building. This participant explained that the availability of the guidelines in Spanish helped him to understand the code requirements and, as a result, improved his skills. However, a criticism was that although the guidelines are available in Spanish – participants' language – the training videos available on the RJC website are provided only in English. In this participant's words:

"There is good information available on the RJC website. There is a guideline in Spanish, but all the training videos are available only in English." (Participant 1)

Access to a specific market of certified products was also pointed out by participants as a benefit of the certification scheme. Three participants (3; 7%) reasoned that the certification scheme helps the company to have new market opportunities. Regarding this aspect, Participants 1 and 6 stated:

"As a certified company we belong to the small group of RJC certified companies. We are actually the only Peruvian company certified by the RJC. This certificate adds value to your company when you go to the market. The market will see you as a responsible company." (Participant 1)

"The certificate helped us. I can tell you that our market has expanded because of the certificate." (Participant 6)

Although Participants 1 and 6 stated the benefits of a new market for gold produced in a responsible manner, the financial benefit of this certified gold is not yet a reality. According to Participant 7, the market is not yet prepared to pay a premium price[10] for certified gold. In this participant's words:

"In my opinion, companies join a certification scheme only if there is a benefit from it. This could be a reputation benefit, for example. But if you are going to sell your certified gold for the same price to the market, it is hard to find reasons to be certified, and that is the situation nowadays. You have some initiatives like the BGI [Better Gold Initiative], but the challenge here lies in getting more companies on board and achieving a premium price paid by the market for certified gold." (Participant 7)

3.3.2 External impacts

Participants provided 44 comments in relation to the external impacts of the RJC. These comments were separated into five different categories: Better Social Performance, Better Environmental Performance, Economic Benefit, Capacity Building and Technological Support, and Women Empowerment (Table 4).

[10] RJC certification does not require a premium price to be paid for gold produced by certified members.

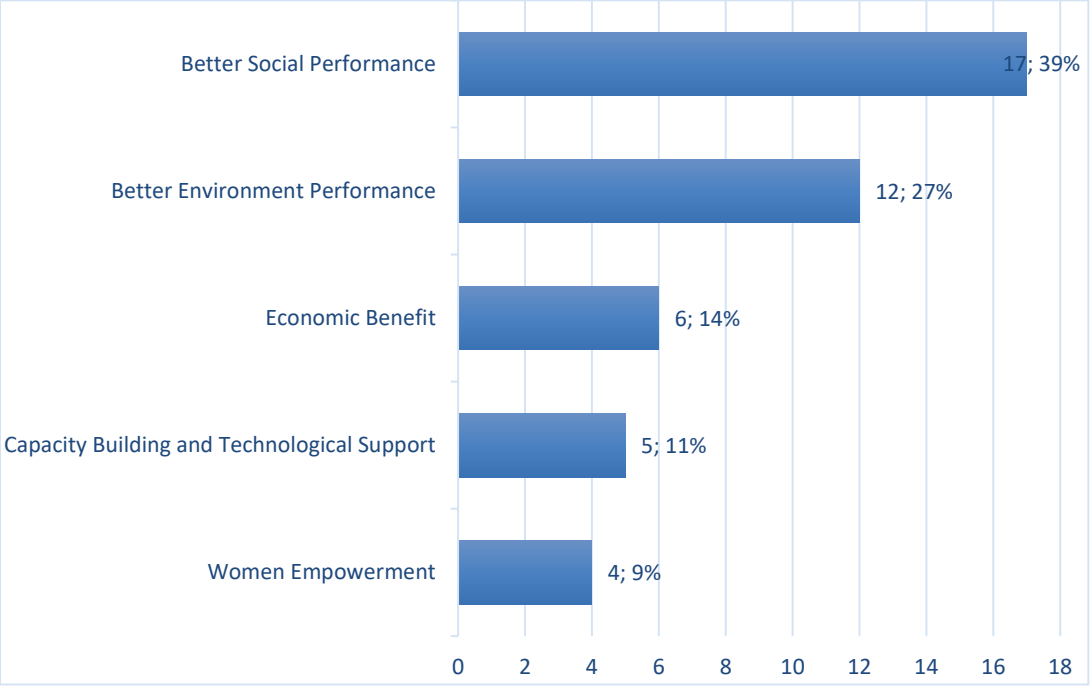

Table 4: External impacts of the RJC

Improved social performance as an external impact of the RJC was mentioned by all participants interviewed and during all meetings conducted with stakeholder representatives (17; 39%). According to these participants, the RJC impacts positively on the social performance of the local communities affected by the company's activities and the artisanal miners operating in the company's area of concession. Human rights, labour rights and health and safety were widely mentioned by participants. For example:

> *"There has been a huge advance in social performance in the last two years. You can see that the working conditions of the artisanal miners now are safer and healthier. They have potable drinking water, toilets, power supply and sanitary facilities for food consumption. We are now talking with local community representatives and artisanal miners about their labour and human rights." (Participant 4)*

A similar statement was provided by Participant 6 in regards to the improvement in the artisanal miners' working and health conditions. This participant stated:

> *"Now there are clean and safe on-site housing camps, there are sanitary facilities where miners can have their meals, there are a sufficient number of clean toilets and there are training facilities where miners learn how to use Personal Protective Equipment, health and safety hazards, first-aid and actions to be taken in the event of an accident or emergency." (Participant 6)*

A similar statement was provided during the meeting conducted with local community representatives and artisanal miners. One of the artisanal miner representatives referred to artisanal miners' labour conditions in the past, citing:

> *"Some time ago there weren't enough toilets. We know that in some places miners used to sleep in, as we call here, a 'cama calliente*[11]*' system." (Participant 10)*

[11] *Cama calliente* is a Spanish term, mentioned by artisanal miners, that refers to the rotating use of a bed by miners at the mining site.

In addition to the improvements in working conditions and human rights, the role played by the RJC in fostering formalisation of artisanal miners was mentioned by some of the participants. According to these participants, the RJC provided guidance for companies to engage directly with ASM occurring within the company's areas of operation, and provided guidance on initiatives that enable the professionalism and formalisation of the ASM. Regarding this matter, Participant 7 stated:

> *"RJC guidelines are helping us with the formalisation of artisanal miners. The certification provides guidelines to assist artisanal miners operating in our concession area and also provides guidance on the requirements for health, safety and environment." (Participant 7)*

Improvements in environmental performance was the second-most mentioned external impact of the RJC (12; 27%). Some participants commented that the RJC requirements also help to prevent an increase in environmental liabilities and pollution caused by the use of mercury and cyanide. It has been established by the RJC that members in the mining sector using cyanide in the recovery of gold shall be certified by the ICMC, which is a good example of interoperability. In regards to the use of mercury, the RJC requires that members should adopt responsible management practices in accordance with applicable laws. The RJC also motivates members to take steps to control and reduce the use of mercury (Responsible Jewellery Council, 2013a). Regarding improvements in environmental performance, Participant 2 stated:

> *"Our environmental management system has improved with the RJC. We now have environmental targets defined and environmental policies and procedures in place." (Participant 2)*

When asked for an example of a positive impact of the certification scheme on the environmental performance of the company, Participant 4 pointed out:

> *"There has been an improvement in our environmental management approach as a whole. A good example is the waste management plan. We now have a proper waste management plan to manage our residues and comply with RJC requirements. Also, the RJC helped improve people's awareness regarding waste." (Participant 4)*

An important insight was provided by Participant 4. According to this participant, not only did the environmental management system and the company's environmental performance improve, the awareness of different stakeholders in regards to environmental aspects improved as well. The RJC played an important role in not only providing guidelines to improve environmental performance and responsible practices for environmental management, but also in improving the general awareness of stakeholders regarding environmental issues.

Improvements in artisanal miners' practices as a result of the RJC were mentioned by participants as well. Participant 7, for example, stated that the RJC provided guidelines to improve the environmental performance of artisanal miners. In this participant's word:

> *"RJC guidelines are helping us to improve the artisanal miners' environmental performance. RJC lists all the main environmental aspects we have to manage, including the environmental risks associated with artisanal mining." (Participant 7)*

Similar statements were provided by two artisanal miners. They said:

> *"We had training and we now know about the environmental consequences." (Participant 13)*

"We are not using mercury anymore. The engineer [the company's environmental engineer] came to explain the problems of using mercury. Not only health problems but environmental problems. " (Participant 10)

Eliminating the use of mercury was one of the requirements established by the company to work with artisanal miners as contractors. The company provides financial and technical support for artisanal miners to seek formalisation and abandon the use of mercury. The RJC Code of Practices establishes, among other requirements, that members in the mining sector using mercury in artisanal and small-scale mining and processing activities shall take steps to control, reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, such mining and processing.

Economic benefit was the third-most mentioned external impact (6; 14%) of the RJC scheme. According to participants, the integration of artisanal production into Minera Yanaquihua operations, through the use of local artisanal miners as contractors, has resulted in economic benefits to artisanal miners. The rationale behind this economic benefit to artisanal miners is that artisanal miners will improve their production by sending their ore to be processed at Minera Yanaquihua, which has processing facilities with a high recovery rate of gold from ore. A company representative said:

"Artisanal miners are receiving more now because the recovery rates of our ore processing facilities are higher than the recovery rates of the artisanal miners' [ore processing facilities], which is done with outdated technology." (Participant 3)

Participant 5, another company representative, provided a similar comment:

"Artisanal miners working with us have better economic performance. Our ore recovery rates are way better than theirs." (Participant 5)

This participant also stated that in addition to the higher ore recovery rates obtained through the company's processing facilities, there is a "cost of opportunity". This cost of opportunity is the ASM potential economic loss due to the time needed for artisanal miners to process their ore with inferior technology. In this participant's words:

"There is an economic loss when artisanal miners process their [own] ore. Such a situation results in an economic loss to them. They receive payment per ton of ore mined, so spending time processing with outdated technology rather than producing is not beneficial to them. There is an opportunity cost there. The opportunity cost is the time spent processing ore employing outdated and more expensive techniques, which could be used to produce more ore instead." (Participant 5)

Support for these statements was observed during two meetings conducted with artisanal miners. Those artisanal miners informed that they are now receiving a better price for their gold sold and they are extracting more ore, which has increased their income[12].

Capacity building and technological improvements were also considered an external benefit (5; 11%) of the RJC scheme. The RJC establishes that members should foster the development of the communities in which they operate through the support of community initiatives – It is important to highlight that RJC requires

[12] Factors such as the volatility of the gold price in the international market, commercial contracts established between artisanal miners and the company, and location of gold deposits can have an economic impact on artisanal miners' income. However, these factors were not considered in this analysis.

auditing of local development and engagement, as well as professionalisation and formalisation of local artisanal miners in its certification process, as appropriate to the situation (Responsible Jewellery Council 2013a). In this context, it was observed that the company has some corporate social responsibility programs in place to foster local development, such as local procurement initiatives. Two examples were observed where local community representatives receive technical and financial support to become a company supplier. In the first instance, local community representatives became food suppliers for the company's restaurant after receiving technical and financial support. In the second instance, women representing a local community created a cooperative that produces and sells mining uniforms to the company. Again, the company provided administrative, technical and financial support to create local development. Nowadays, this cooperative is not only suppling mining uniforms to the company but is trying to expand its business by producing additional products. Regarding this initiative, two members of the women's cooperative said:

> *"The company not only gave us money and equipment but also gave knowledge and ideas to run the business. The company lent us money to buy raw material and provided the sewing machines. We produce the uniforms and they buy them." (Participant 14)*

In addition to the above corporate social responsibility initiatives, training programs implemented by the company were considered another instrument to foster capacity building, especially with environmental, human rights and health and safety aspects. These training programs involve employees, contractors, local artisanal miners and local community representatives.

Women empowerment was also observed during the fieldwork and commented on during interviews (4; 9%). Empowering women to engage in economic life across different sectors is important to improve the quality of life of women and communities, foster development and advance gender equality. Such a situation was observed twice during the fieldwork – the first was during a meeting with some Pallaqueras[13], the second during a meeting with the women's cooperative that produces mining uniforms. In both situations it was observed that the company's initiatives, providing financial and/or technical support to foster local development and improve working conditions, helped to increase the income of these women, which promoted gender equality and empowered women. According to some of the women interviewed, they gained more respect from their families and community members because their wages are now helping to sustain their families, where once it was only through their husband's income. Regarding this matter, for instance, one of the women interviewed said:

> *"I really feel that now I have more respect. At home my husband and my son listen to me because I am also bringing in money at home". (Participant 12)*

3.4 Case Study 2 Conclusion

Examples of positive internal and external impacts were provided by participants during the fieldwork conducted at Minera Yanaquihua. In regards to the internal impacts, the RJC certification scheme was considered by the majority of participants to be an important guideline. Participants highlighted the importance of the RJC Code of Practices in delivering internal capacity building, improving the company's environmental and social performance and improving management systems. The capacity of the RJC scheme

[13] *Pallaqueras* is a Spanish term that refers to women who collect low-grade ore from tailings discarded by other miners and sell it for processing.

to improve the company's reputation and allow access to new markets for certified gold were also mentioned. The recognition of the ICMC by the RJC is also an important example of interoperability.

A more effective and improved stakeholder engagement process was also attributed by participants to the RJC guidelines. This was the internal impact most mentioned during the fieldwork. According to participants, the company improved its communication processes not only with its internal stakeholders but also with some important external stakeholders, such as local artisanal miners and local community representatives. External stakeholder representatives interviewed also provided statements confirming that the communication process and the relationship with the company has been improving over the last few years.

Although positive comments were provided about the new engagement processes and communication approaches used by the company, issues with the communication process were identified in two situations during the fieldwork. During two of the meetings conducted with local community representatives, concerns were raised by participants in regards to the company's environmental performance and local development initiatives. In another meeting conducted with artisanal miners working as contractors, questions were raised about the veracity of the results of laboratory tests conducted by the company to analyse the quantity of gold present in the ore produced by these artisanal miners.

Recommendations to improve the audit process and accessibility through the availability of training videos in Spanish were also identified during the interviews. A more in-depth approach involving material aspects and the use of local auditors were suggested by participants as improvement opportunities regarding the audit process.

Important positive external impacts were also mentioned by participants. Improvements in human rights, labour rights and working conditions of the artisanal miners were most commonly mentioned. The majority of internal stakeholders interviewed stated that the working and labour conditions of the local artisanal miners have improved. During all meetings with external stakeholders, including artisanal miners, support for this statement was obtained. Improvements in the environmental performance of the local artisanal mining operations was the second-most mentioned external impact, followed by economic benefit.

In addition, the RJC Code of Practices plays an important role not only in guiding the company to improve its social and environmental performance, but also in how to foster local development and how to support professionalism and formalisation of the ASM occurring within its areas of operation. The RJC Code of Practices determines that members in the mining sector should engage with the ASM as part of the member's community engagement approaches and social and environmental impact assessments. Also, in such a situation, members should have initiatives in place to enable the professionalisation and formalisation of the ASM. It is important to highlight that the RJC scheme addresses and fosters the relationship between medium- and large-scale mining companies and local artisanal miners.

According to participants, the Minera Yanaquihua approach of integrating artisanal production into its operations using local artisanal miners as part of its sourcing practices, combined with the use of the RJC Code of Practices, is positively impacting the livelihoods of artisanal miners within and outside the company's concession. This approach, where local artisanal miners can work as ore suppliers to the company, in return for seeking formalisation and applying improved social and environmental practices, with the company's financial and technical support, has been increasing the company's production and reducing its risks and has been improving the livelihoods of artisanal miners through more responsible and effective mining practices.

Women empowerment was another positive side effect observed as a result of the company's initiative to work with women artisanal miners (*pallaqueras*) and local development initiatives.

In conclusion, although the impacts presented in this section were attributed by participants to the RJC certification scheme, through the research method employed it is not possible to identify whether these impacts could be attributed entirely to the certification scheme or to other factors, such as the company's corporate social responsibility initiatives, the applicable local regulations (e.g. Peruvian Law 27651 "Law of Formalization and Promotion of Small-scale Mining and Artisanal Mining"), governments' and NGOs' involvement in the negotiation process between the company and artisanal miners, or market volatility. We suggest a more robust and extensive research method to undertake in-depth analysis to further explore and measure the impacts on the ground that are directly attributable to the RJC.

It is also important to highlight the important role played by Solidaridad[14] in this process. The RJC and Solidaridad partnership on activities that support more transparent and accountable practices throughout the gold supply chain has developed a pilot project in Minera Yanaquihua to test an innovative approach for decreasing the risks and increasing the benefits of industrial gold mining for people and the environment. This pilot project involved the use of the RJC Code of Practices as the standard for responsible social and environmental practices. Solidaridad provides guidance and training to Minera Yanaquihua on setting targets related to the implementation of the RJC standards and broader development goals and foster partnerships with leading branded jewellery companies that want to ensure that their gold is sourced responsibly.

Such a partnership arrangement provides greater credibility to the overall certification scheme. Vigilance by civil society is an important metric for the overall quality of the scheme. However, there needs to be mutual trust that the process will be objectively based on collectively established criteria for excellence. When this partnership was established in 2012, erstwhile director of RJC. Fiona Solomon commented to investors that: "The jewellery supply chain as a whole benefits from proactive multi-stakeholder efforts such as these and we look forward to working alongside all involved."[15]

[14] Solidaridad is an international non-profit organisation with a focus on sustainable trade.
[15] RJC Partners with Solidaridad on Gold Mining Pilot Project (2012). http://www.idexonline.com/FullArticle?Id=36927 (Accessed, March 16, 2017).

4. Synthesis and Lessons

This section presents a set of findings and lessons from the two case studies analysed in this research. It was identified that in both cases, participants provided similar comments on the internal impacts of the ICMC and the RJC. Enhancing the company's reputation with its stakeholders, improving management systems and internal control structures, providing guidance to engage with stakeholders in a more effective way and improving HSE performance were the topics most often mentioned by participants, in both case studies, as positive internal impacts of certification schemes.

However, this similarity among comments provided by participants in both case studies regarding the internal impacts was not observed for external impacts. Improvements in community awareness in relation to HSE issues, better management of impacts and capacity building were the ICMC's external impacts mentioned by participants. Improvements in social and environmental performance, economic benefit, women empowerment, capacity building and technological support were the external impacts mentioned that were associated with the RJC. These results reflect the difference in the scope and objectives of the RJC and the ICMC. While the ICMC focuses exclusively on the safe management of cyanide produced, transported and used, the RJC scheme has a broader scope, supporting and promoting responsible ethical, social and environmental business practices.

The importance of a credible and transparent assurance process, conducted with quality and by competent assurance providers with knowledge of the regional and local context, was highlighted by participants in both case studies. These were considered important instruments not only to demonstrate compliance and bring credibility to the certification schemes, but also to improve practices on the ground.

The ability of these certification schemes to contribute to capacity building and improve practices was also commonly mentioned by participants in both case studies. According to participants, both internal and external stakeholders benefit from the HSE and stakeholder engagement best practices provided by these two certification schemes. For example, in both case studies, participants attributed the improvement in the relationships between the companies and their stakeholders, especially the local communities, to the RJC scheme and the ICMC. According to these participants, the guidelines and requirements of these two certification schemes in relation to the engagement process with stakeholders were fundamental for both companies to improve their relationships with local community representatives.

An additional significant aspect observed was the important role played by the RJC and Solidaridad in providing guidance and supporting professionalism and formalisation of ASM. The RJC Code of Practices addresses and fosters the relationship between medium- and large-scale mining companies and local artisanal miners The approach adopted by Minera Yanaquihua to integrate artisanal production into its operations using local artisanal miners, combined with the use of the RJC Code of Practices, presents a good example that should be further explored and replicated. Local artisanal miners working as ore suppliers to the company, in return for seeking formalisation and applying improved social and environmental practices, with the company's financial

and technical support, increased the company's production, reduced environmental and social risks associated with ASM and improved the livelihoods of the artisanal miners involved.

In conclusion, in order for companies to have a more robust outcome from certification schemes in the mining sector, these certification schemes should consider the following key design characteristics:

- ***Effective and credible assurance process.*** The assurance process serves as an instrument to mitigate the risks of non-conformity, to improve practices on the ground and to uphold the credibility of the scheme. Schemes should design and implement their assurance processes based on best practices, such as:
    - use of a materiality or risk management approach to determine the scope and sampling strategy;
    - the assurance team should be independent and impartial;
    - foster cross-recognition to avoid duplication and overlapping;
    - have a follow-up mechanism to monitor and assess action plans addressing situations of non-compliance;
    - accessibility and transparency of summarised results of assurance processes as well as details about the assurance team;
    - have an accreditation process and an oversight mechanism in place to avoid poor assurance processes;
    - consider stakeholder consultation and input as part of the assurance process;
    - have the audit procedures and sampling strategies defined and documented.

- ***Transparency and stakeholder engagement***: Lack of transparency and lack of an effective engagement with local communities and other important stakeholders creates expectation gaps and affects legitimacy. Building trust among all relevant stakeholders is one of the key aspects to achieve legitimacy. Schemes should identify their key stakeholders, develop and implement a stakeholder engagement strategy and present relevant information in clear and accessible formats for their key stakeholders. For example, information about governance and performance should be kept in public domain to improve accountability, objectives, scope and the problems schemes are trying to solve should be clearly communicated and understood by the stakeholders involved, decision-making processes and how disputes are settled should be clearly communicated and understood, communication channels for stakeholder to obtain their perceptions, expectations and concerns should be in place.

- ***Artisanal miner relations:*** Relationship between ASM and mining companies are better managed if conducted by an independent entity, such as a NGO, which has legitimacy to the community. An independent entity can help to regulate or reduce conflicts, implement best practices on the ground and facilitate the negotiation process between companies, representatives and affected and/or interested stakeholders.

- ***Collaboration, harmonization, cross-recognition and interoperability:*** Duplication and overlapping between schemes can create confusion in the market place. Also, the uncoordinated existence of competing schemes creates a fragmented governance system and the diversity of scope and operating

practice result in weak outcomes. Schemes should explore opportunities to improve collaboration, harmonization, cross-recognition and interoperability to amplify the outcomes achieved by individual schemes, reduce audit overlapping and exchange knowledge practices. Interoperability should not only be focused on a horizontal approach, where a specific sector across multiple industries is considered, but also on a vertical approach, where different actors within a specific supply chain are considered. Harmonisation between schemes and regulations, laws and/or principles already in place or under development should also be considered.

- ***Monitoring and evaluation mechanisms:*** Monitoring and evaluation mechanisms are important instruments for schemes to assess their impacts, to improve their systems, to support decision-making processes and for providing accountability to stakeholders. Such mechanisms should be in place to collect information and to test whether schemes are achieving their goals. These mechanisms are also important to evaluate whether intended changes are happening and where strategies need adjusting. Schemes could also explore opportunities to have stakeholders involved in monitoring processes to improve credibility and foster capacity building. In addition, it is crucial to align the scheme's theory of organizational and social change with the monitoring and evaluation mechanism.

The findings of this report should be considered in concert with the earlier deliverables of this project (provided on the CSRM web site), as a collective research output, geared towards improving the ultimate development outcomes these environmental and social performance assurance mechanisms. Further evaluative research on measureable development outcomes through longitudinal tracking of certified projects would be a positive next step in this research agenda. Such ongoing research would further improve confidence of mining impacted communities of such initiatives.

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