

IMPLEMENTATION OF THE ENTREPRENEURIAL DEVELOPMENT PROGRAM FOR THE DEVELOPMENT OF SUSTAINABLE SMALL BUSINESSES IN MINING AFFECTED COMMUNITIES- CERRO DE SAN PEDRO, MEXICO

Maria Teresa Ledezma, Suzette McFaul, Javier Nava, Andre Xavier
SEF Canada Ltd., #2004-1225 Richards St., Vancouver, BC Canada V6B 3G3 2
Norman B. Keevil Institute of Mining Engineering, The University of British Columbia,
Vancouver, BC, Canada, V6T1Z4

Key words: Sustainability, Mining, Community, Economic Development

Abstract

For so many years, economic development has been implemented as a way to support communities' sustainable development. Such approach has led to economic dependency rather than economic opportunities. Traditionally, mining companies have supported economic development programs as part of their Social Responsibility, yet it doesn't always result in economic benefits for communities. An example of this is the community of Cerro de San Pedro, in Mexico. Throughout the time, the practice of the traditional economic approach implemented by mining companies has not only created an unhealthy dependency, but also led to investment in the wrong sectors. As a consequence, the current infrastructure of the community consists of abandoned hotels, unsuccessful greenhouses and empty farms. Local new businesses have not been started, and the created infrastructure has not been fully seized. The answer to promote opportunities relies on focusing not on the ideas of the planners, but on the ideas, passion, energy and imagination of local entrepreneurs. Economic diversification has to start with entrepreneurs willing to come forward with their ideas. For this to happen, an entrepreneur-friendly infrastructure and environment has to be created. Communities that can successfully create the virtuous circle of economic development, can both produce infrastructure projects and have them properly and fully utilized and maintained. They are capable of developing timely projects based on the needs of entrepreneurs. When a community like Cerro de San Pedro, has this balanced model of economic development securely in place, larger numbers of people explore entrepreneurship, and existing resources and programs are better utilized. This paper presents a comparison between economic development and economic diversification taking as an example the community of Cerro de San Pedro.

Introduction

Throughout the time, mining has been tremendously important to Mexico's economy. *"At the end of 2010, the mining sector represented more than 8% of Mexico's GDP"* (Deloitte, 2012). Such activities are perceived to be the main economic driver in marginalized regions and depressed zones in Mexico (Vargas, 2011) Mining activity was also the incentive for the foundation of new villages and towns far away from the large cities and with difficult access (Vargas, 2011). During colonial times, these new villages and towns were populated and

grew until they reached the status of cities. However, during the second half of the last century, the decline of mining activities has led to the shrinking of these mining cities to the point of converting them into ghost towns.

Cerro de San Pedro (CSP) is a small village 10 miles east of the city of San Luis Potosí, it was the founding town of the San Luis Potosí state in the 15th century after gold was discovered. In the 1970's, there was a renewed interest in Cerro San Pedro municipality with evaluations by different companies to determine the area's potential as a large tonnage, low-grade, bulk mineable deposit (Vargas, 2007).

When the North American Free Trade Agreement (NAFTA) was enacted in 1994, the Canadian Company Metallica Resources Inc. started to explore the old mining town with the aim of exploiting its resources in gold and silver (Vargas, 2007)

Minera San Xavier is a subsidiary of New Gold Inc., it was acquired in 2008 and began operations in CSP with an expected mine life of 10 years. Currently, the mine is approaching closure. New Gold is planning for closure to ensure that a long-lasting, positive socio-economic legacy is left when it is time for the operation to close (Tierra Diversa, 2013).

Background

New Gold maintains a close relationship with the inhabitants of Cerro de San Pedro municipality, which comprises thirteen communities and three "Ejidos" (communally-owned land holdings) within the project's sphere of influence. Yet, the presence of a mining company in Cerro de San Pedro had caused a social conflict among the inhabitants of the neighboring communities of San Pedro, Soledad, and San Luis Potosí, all of whom are concerned with historical heritage, cultural, and environmental issues.

As stated in the New Gold 2009 Sustainability Report New Gold public commitment with the surrounding communities involves:

- A commitment to dedicate efforts to foster sustainable communities.
- A responsible mine closure plan that takes into account the future needs of the local communities.
- The promotion of economic prosperity within the neighbour communities, both during and post-mining operations, by fostering local entrepreneurship.

Many consultancy firms have been assessing the community in the past several years. A baseline report (carried out from November, 2012 to March, 2013 by *Tierra Diversa S.C.*, which was built from seven different specific topics (Population, Economy, Infrastructure, Health, Education, Government and Housing), provided a SWOT analysis in which several areas of challenges and new opportunities for entrepreneurship were identified. Many of the areas of weaknesses that were recognized, such as lack of skills and money, are quite common amongst communities in emerging markets.

In February 2013 an economic impact study revealed that *Minera San Xavier* has done significant investments in community infrastructure projects, to foster local entrepreneurship, and support diversified local capacity building and economic

development. *Minera San Xavier* is fully committed to leave a positive legacy in its host communities (Ortiz, 2013).

The table below shows the infrastructure and projects that were provided by the mine.

<i>Infrastructures</i>	<i>Projects</i>
The development of a nursery	Reforestation
Building houses and schools	The rehabilitation of historic churches
The construction of a new church	trade skills training programs
Equipment for schools	Monetary Support for cultural festivals
Building clinics and providing medical services	Providing jobs
Roads	Providing funding and resources for businesses
	Chicken farming
	Fish farming

Challenges of the infrastructure and projects

Most of these infrastructure gifts provided by *Minera San Xavier* have assisted the communities while the direct economic projects have seen little or no results. For instance, the projects have resulted in an abandoned hotel, empty farms and greenhouses. Unfortunately, when companies focus on “building physical structures, rather than developing the social capability of communities, [it] is likely to increase the communities’ dependence on the company” (Jenkins & Obara, 2008)

The university *Tecnológico de Monterrey* and *Minera San Xavier* signed a collaboration agreement in January 2015 with the aim of improving the entrepreneurial development in the municipality of Cerro de San Pedro and within the company's personnel, as an alternative solution to the mine closure. The goal of this program consisted on impacting 30 people through intensive courses on Saturdays during 5 months, where professors from the Business School of the university covered topics such as entrepreneurship and innovation, finances, marketing, and creation and assessment of business plans (Flores, 2015).

These Projects were chosen by the mining company people and were built by outsiders, with little management or decision involvement from local community members. Some of were only accessible by the more affluent members of the community and not by the poorer members.

The sum of these factors is that, with the best of intentions, the projects were imposed upon to the local community and they therefore did not feel any particular ownership of them nor did they have the needed capabilities to sustain them.

Companies such as New Gold and Rio Tinto, Lundin Mining are striving to make their CSR initiatives more effective and have begun incorporating Entrepreneurial Development as a tool to create stronger, more resilient communities, through local economic development.

New Gold's Peak Gold Mine, like other mining companies, is seeking to make their community investment initiatives more efficient and is committed to providing positive and lasting impacts in Cobar. The management team at New Gold's Cobar Mine, Australia, for instance, decided to approach its community closure plan from a different angle than the usual top-down approach. The company supported a grassroots approach to planning and implementing programs to foster local economic diversification. Community members are at the center of the process, which promoted community engagement and helped to create a strong sense of ownership. It is expected that if the community enjoys some social capital and is given the right tools to build capacity, it will be natural to develop long-lasting successful projects (Botta, et al., 2014). In Cobar, following the implementation of this economic diversification model, the town opened 43 new businesses, providing 90 new jobs, generating over C\$ 2,456,300 in gross sales, and reinvesting C\$ 776,650 into the community (McFaul, et al., 2013).

It is stated in Community Development Toolkit published by the International Council on Mining and Metals in 2005:

"Often these efforts, although appreciated as generous gifts to local communities, have not lasted beyond the life of the mine, and sometimes not even beyond the tenure of the particular company staff that instigated the projects...Further, if local communities and government agencies become accustomed to mining companies taking charge of the provision of infrastructure and services, an unhealthy dependency relationship can evolve, which works against sustainability" (ICMM2015, page?)

Bottom up approach- right side of the Economic circle

Failure to involve the beneficiaries of CSR – communities need to be given the opportunity to help themselves through ongoing participation in community development projects rather than being recipients of top-down "gifts" from the company. Consultation with communities - where consultation with communities does take place it is often superficial and inadequate. Consultation is rarely allinclusive, leading to some members of the community being given more 'voice' than others, usually those who hold power in the community such as men and tribal leaders. (Jenkins and Obara 2008)

Much like many other things in our world, economic development can be thought of as a cycle. In any cyclic model one can think of, each part of the cycle is as important as all the others. On the top down versus bottom up approach based on communities and entrepreneurs works in a circle and these are crucial elements to the circle.

The circle is formed by two sides: the economic development side (Top-Down approach) and the entrepreneurial development side (Bottom-Up approach), when one of the sides is pushed the circle starts moving. The right side is the entrepreneurial development side, focusing on the entrepreneurs and their passions.

The Top-Down approach is usually applied by leaders and governments from the communities, with strategic plans to create infrastructure and programs that attract and retain businesses. But this development will not be useful unless there is the capacity to take advantage of it within the community. Only when local businesses are born, developed or expanded, this capacity comes to light. If there are no entrepreneurs to exploit the infrastructure, the circle never starts in motion.

The *Virtuous Circle of Economic Development* provides a better understanding of how the SEF Methodology takes a Bottom-Up approach engaging people at the grassroots level. It focuses not on the ideas of the consultants, but on the ideas, passion, energy and imagination of the entrepreneurs. Creating an entrepreneur-friendly environment and infrastructure, entrepreneurs will be willing to come forward with their ideas and ultimately use the infrastructure.

Implementation of SEF Methodology

The Entrepreneurial Development (ED) programs have a better than 80% success rate. The ED method helps communities harness the power of new and existing local entrepreneurs to bring a sustainable change. The empowerment and engagement of the community will lead to the creation of the communities' own wealth for long term wellbeing and prosperity.

It is important to recognize you cannot provide another gift to the community. New ~~work~~ GOLD requested a community visit to Cerro de San Pedro by members of SEF Canada. During a 5-day visit- facilitated by Suzette McFaul and Ze Ferreira the methodology was introduced on site to citizens and practitioners. Insights were shared and tools transferred. The five days included meetings and a workshop with community members, government representatives and university professors; some of the topics discussed were business opportunities, local entrepreneurship and economic diversification.

The outcomes of the workshop include the acceptance of the program and the establishment of a Working Group, which later transformed into a Project Management Team. The importance of this step provided the opportunity for the community to take ownership and responsibility for a project. The feedback from the participants showed that the workshop delivered excellent value.

Upon the request of the community after a due diligence of 15 people in the working group, SEF was funded by the mine to provide a full ED project to the community. The community would provide the human and social capital as funding to the project while the mine would provide monetary resources.

SEF was hired to provide the methodology, train and provide ongoing support mentor the following individual aspects of the program:

- A Project Management Team consisting of a core representation from across the community; the managers of the project
- A Facilitator; the person to work one on one with the entrepreneurs
- A Resource Team of volunteers to network the Facilitator into the community and brainstorm about local resources.

The **Project Management Team (PMT)** has the tasks to start the ED project, integrate its activities within the community and manage it throughout the time. Its members are community volunteers; in this project is a group of 16 people along with 2 mining personnel. This group operates the project but ownership is everyone in the community.

The **Facilitator** operates in the ground and within the community, interacting with local, both prospective and current; entrepreneurs who want to either establish or expand a business. The Project Management Team is responsible for the hiring and managing the facilitator. The facilitator is a locally born person with credibility in the eyes of the community. The facilitator, who has a strong commitment with the progress of the community and has been engaged with the project since the beginning, was hired. She is the only paid person in the program.

A local student from the *Tecnológico de Monterrey- México* was trained and hired to assist the Project Management Team in the recruitment, training and mentoring of the Facilitator.

The Facilitator reports to Chair of the Project Management Team at least once per month. The Facilitator is networked into the community by the Resource Team. The Facilitator does not operate out of an office. Meetings take place in the community at coffee shops and clients' houses mainly. The program is not pushed onto the clients – they must elect on their own to avail themselves of the ED services.

The **Resource Team (RT)** is composed of residents of the communities whose task is to introduce and network the Facilitator into the community and to share knowledge or contacts that will help find solutions to solve problems encountered while helping clients.

The RT is comprised of 60 very diverse people from different levels, geography and backgrounds, for instance: farmers, teachers, engineers, house keepers, sewers, technicians, among many others. People from community, believe in private enterprise, and are willing to meet monthly to brainstorm solutions to entrepreneurial client problems. They are

responsible for marketing the Facilitator into the community through a series of personal introductions and attending monthly meetings where brainstorming solutions and resources for entrepreneurs are collected. Commitment to meeting monthly for no more than one hour is key to creating a successful core group. The consolidation of the PMT and RT was achieved during the second visit. The group continues to grow and every month more people receive training.

During the third visit, a facilitator's training was held along with community members; Project Management and Resource Members for 5 days in classroom. During the training, presentations from individuals from the class were made. Many of them presented heartfelt and sincere presentations to express their belief in the future success that the project will bring and others showed considerable trust in the trainers- going from quiet and reserved to extroverted and open. In addition, three participants made a trip to the mine site specifically to thank the CSR team of the mine and express their gratefulness for the opportunity. They mentioned that they were uncertain how they could ever repay for such a great opportunity.

During the same week of training, 8 community members came in and volunteered as guest entrepreneurs. They were inspired by the methodology and some of them have come back as clients and/or resource team members.

At the end of the 5 days training, the whole Project Management team came together on Friday to join in on the training program and the same day at night, the community gathered for a potluck in celebration of the project. More than 50 community members (kids, spouses, friends, etc.) came in and the facilitator was formally introduced to the community. Introductions from the Resource Team members and with clients- entrepreneurs or people interested in opening a business immediately started.

The facilitator is expected to meet about 300 people during the first 90 days of operation. In Cerro de San Pedro, the facilitator has had close to 200 introductions during the first 120 days of operation. This fact is considered a success. Historically, conflicts between families have been present in the community. *The facilitator of the Cerro de San Pedro project stated:*

"This may be the first time the community gathers together to work for the purpose. The numbers of presentations so far are gone beyond expectations..." (Gisela, facilitator)

Understanding the culture is crucial to overcome challenges and to promote a healthy and sustainable development of the community.

Monitor and assess the implementation process

SEF Canada monitored and assessed the three main components of the project (the facilitator, the Project Management Team and the Resource Team) to make sure that the project's integrity is not affected. Not only phone communication is maintained in a weekly

basis, but a fourth visit is performed. The idea of doing continuous mentoring a support is to help the program and the facilitator overcoming the challenges found.

Outcome

Businesses assisted by Entrepreneurial Development (ED) programs have a better than 80% success rate, turning the business success rates upside down. The methodology has developed from experiences and insights that have evolved in this field since 1997 (McFaul, 2014).

By providing local people with the resources and knowledge they need in order to be successful, a parallel economy is born in the community that is able to create immense wealth by capitalizing on the talents that already exists there.

The project now has 80 participating entrepreneurs, 45 community volunteers and 18 volunteer Project management team members. The facilitator has met with clients over 115 times to provide assistance in different areas. As showed in charts (1 & 2) below, 63% of assistance provide to clients has been on "Business Concept" and 65% of them want to provide "Services". Every month the Resource Team gathers together to brainstorm ideas and resources to help clients. At this point of the ED project in CSP, many clients are moving fast and are quite inspired the methodology implemented.

Throughout the life of the project, the community has learned that a community how to help its own people to transform their ideas into viable enterprises is also a community that can benefit from better infrastructures because, in the long term, it will have the resources to maintain them.

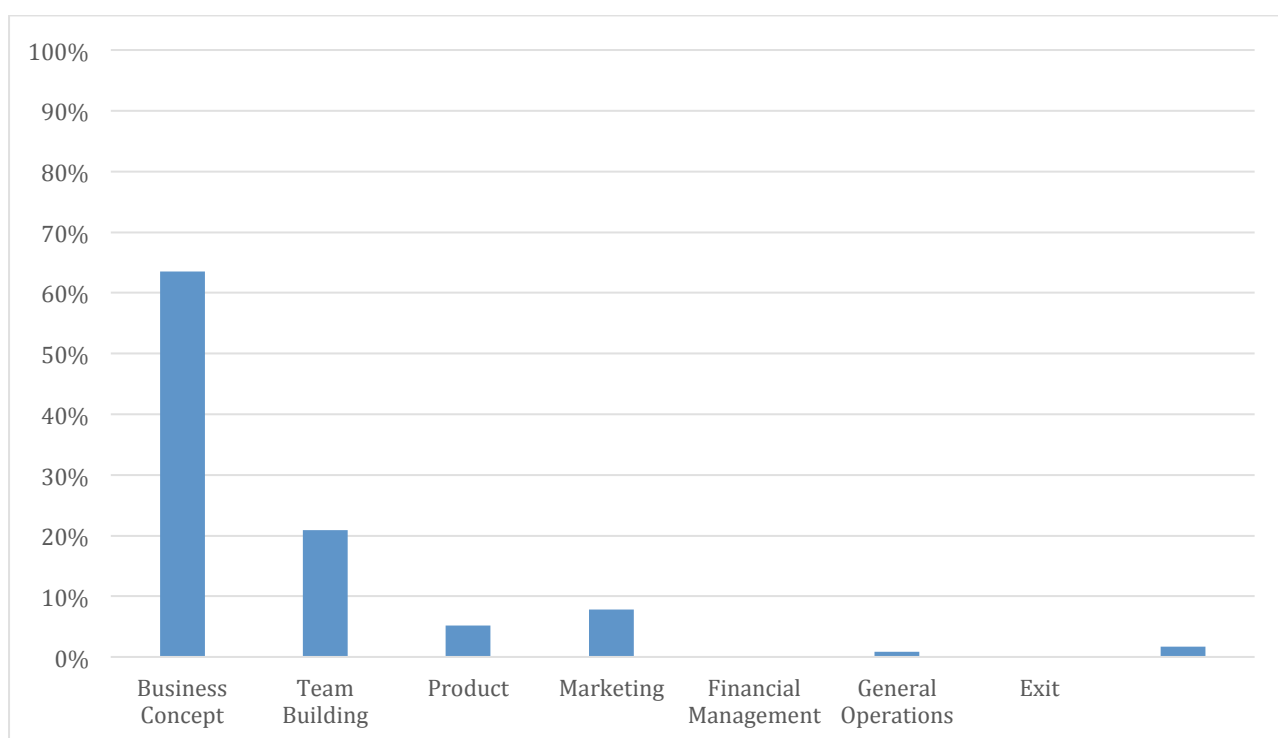


Chart 1: Type of assistance provided to clients

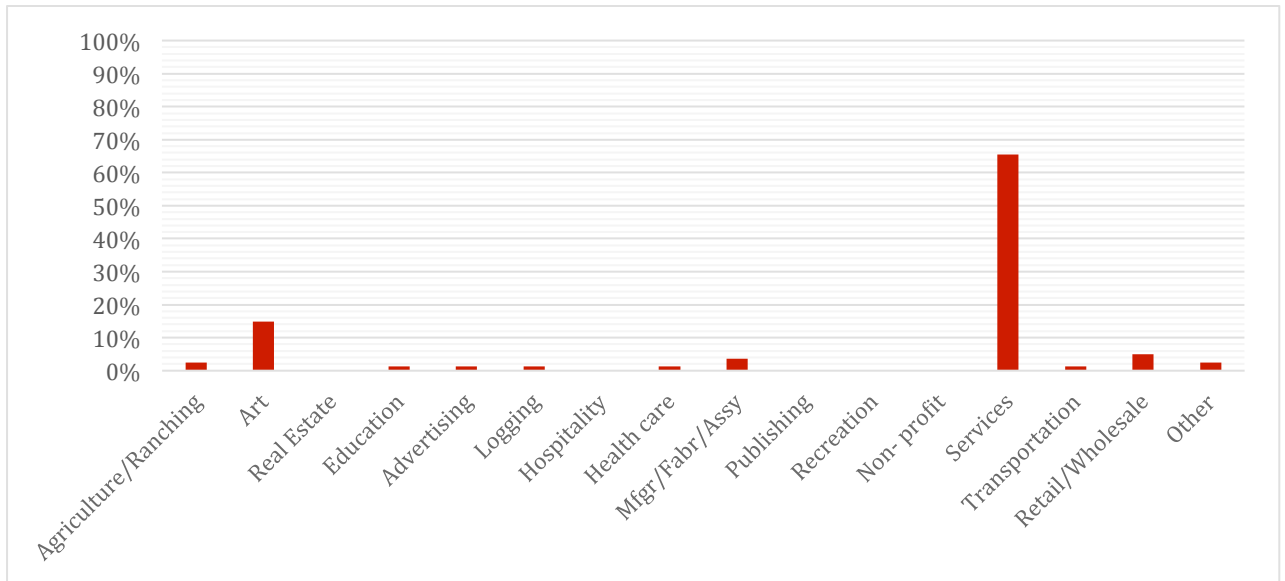


Chart 2: Types of clients by Percentage

Conclusions

Those in the community of Cerro de San Pedro, who have been related to the project, as members of the Resource Team, the Project Management Team, clients or as the facilitator, have had a clear change in their mindset. This mindset change consists of the following understandings:

- The community believe they has what it takes to catalyze economic development in Cerro de San Pedro;
- The larger and more diverse Resource Team is, the wiser solutions for the clients and the more ideas there would be available;
- When a business becomes a success, the community and those in the surrounding will also be benefited from it;
- One of the most critical aspects in an entrepreneur is the passion that they have in the area of the prospect business;
- Having the right team in place covering each area of the Universal Management Principles is critical for a business success.

In addition, presentations were made from individuals in the five days training. Many of them presented heartfelt and sincere presentations to express their belief in the future success that the project will bring. In fact, three participants made a trip to the mine site specifically to thank the CSR team and express their gratefulness for the opportunity. They mentioned that they were uncertain how they could ever repay for such a great opportunity and the group committed to make this the most successful project in Latin America.

The traditional philanthropic approach to community investments often fail to create sustainable benefits and miss opportunities to build social capital, which is critical for the

social and economic development of local communities. Cerro San Pedro has re-focused its community investment strategy to support the development of local social capital and invest in projects, which meet a sustainability criteria (S. Costa, 2015). Clearly, the management team of New Gold has approached their community closure plan from a different angle than the usual top-down approach.

Economic development has already started in the community and consequently, the economic base can be diversified. This paper shows why creating a successful CSR project is important to consider that they must be community driven and owned by the community. This helps to mitigate the dependency that can be created by the mine especially after the mine closes. The sooner a process is in place in the mining cycle, the greater chance of economic independence and success for the community.

Deloitte, 2012. Mining industry in Mexico. Vancouver, Canada

International Council on Mining and Metals (ICMM), 2005. Community Development Toolkit. London, UK

Flores, J. (2015) Apoyado por el Tec de Monterrey, Minera San Xavier busca soluciones de emprendimiento. SNC Portal Informativo. SLP, Mexico.
<http://www.itesm.mx/wps/wcm/connect/snc/portal+informativo/por+tema/educacion/slpminesasanxavier27ene15>

Corporate Social Responsibility (CSR) in the mining industry - the risk of community dependency. By Heledd Jenkins¹ and Louise Obara² 2008

Jenkins, H. & Yakovleva, N. 2006. Corporate social responsibility in the mining industry: Exploring trends in social and environmental disclosure. *Journal of cleaner production*, 14(3), 271-284.

McFaul, S., Xavier, A.M., & Mafu, N. (2013). Supporting mining community development through economic diversification: The adoption of Enterprise Facilitation (EF)™ in Cobar, Australia. 6th International Conference on Sustainable Development in the Minerals Industry, Milos, Greece.

N.A. Botta, S. McFaul, A.M. Xavier, 2014. Economic diversification and mine closure: An analysis of the Misima Mine case. *Brazil Mine Closure Conference 2014*

SEF Canada Ltd. (2014). Economic Diversification and Community Development Workshop for Minera San Xavier S.S. de C.V., New Gold. Cerro de San Pedro, Mexico

S. Costa, 2015. Social impacts of mine closure: engaging employees and host communities in planning for closure. *Mine Closure 2015 – A.B. Fourie, M. Tibbett, L. Sawatsky and D. van Zyl (eds)*

Tierra Diversa S.C. (2013). Informe: Estudio de Línea Base, Empresa Minera San Xavier. SLP, Mexico

Ortiz, R. 2013. Economic Impact Study. Minera San Xavier. Mexico

US Census Bureau, 2013. [Interactive time series showing Establishment Birth and Exit Rates by firm age]. Business Dynamics Statistics. Retrieved from <http://thedataweb.rm.census.gov>

US Department of Commerce, 2014. [Interactive data showing Jobs by Industry]. Bureau of Economic Analysis. <http://www.bea.gov/itable/>

Vargas, J. 2007. Co-operation and conflict between firms, communities, new social movements and the role of government- Cerro de San Pedro Case. Instituto Tecnológico de Cd. Guzman, Jalisco, Mexico.

Vargas, j 2011. "Cerro de San Pedro: Grass Roots Movements in Cooperation and Conflict to Stop a Living City from Dissapearing" . Presented at the Seventh International Critical Management Studies Conference, Naples Italy, July 2011.